# Study of the Current and Future Needs of the Professional Nursing Workforce in Michigan

**JULY 2001**

*Prepared for*

Michigan Department of Consumer and Industry Services

*Prepared by*

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# Executive Summary

The information collected and analyzed in this study suggests that the current supply of nurses is not meeting the demand and need for nurses in Michigan and the situation is going to get worse. Unless current trends are reversed, the gap between the supply of nurses and the demand for nurses will begin to widen rapidly by the year 2010.

Data were collected from licensure surveys of Michigan nurses, focus groups with nurses, and a survey of hospitals on the use of nursing personnel. In addition, the study includes a review of recent research literature. This study was commissioned by the Michigan Department of Consumer and Industry Services (MDCIS) in response to direction from the Michigan legislature (Public Act 256 of 2000). This study has been undertaken in conjunction with the Michigan Board of Nursing, the Michigan Nurses Association, the Michigan Organization of Nurse Executives, and the Michigan Health and Hospital Association. The MDCIS contracted with Public Sector Consultants, Inc., a nonpartisan public policy research firm in Lansing, to carry out the study.

The compiled evidence shows that:

- The population in Michigan is growing faster than the number of nurses. While the total number of active nurses in Michigan increased by approximately .4 percent from 1996–97 to 1998–99, the state population increased by approximately .8 percent.
- The rate of growth in the number of registered nurses in Michigan is slower than the national growth rate. The number of active registered nurses in Michigan increased by 2 percent in the two-year period between 1996–97 and 1998–99. Preliminary findings from the *National Sample Survey of Registered Nurses March 2000* show a 5.4 percent increase in the number of registered nurses during the four year period between 1996 and 2000. This is the lowest increase reported for the country since the national study was initiated in 1975.
- The number of graduates from nursing education programs is declining. In a survey conducted by the MDCIS in May 2001, nursing education programs in Michigan show a decline in the number of registered nurse graduates from 3,293 in 1997–98 to 3,112 in 1999–00. The number of graduates from associate's degree nursing programs has declined steadily. The number of graduates from baccalaureate programs has fluctuated, declining by 4 percent one year and increasing by 4 percent the next year. Further declines are projected for 2000–01 and 2001–02 in the number of graduates from both associate's degree and baccalaureate programs. By 2001–02, nursing programs project only 2,699 registered nursing program graduates.
- The number of graduates from programs for licensed practical nurses also decreased, from 967 in 1997–98 to 934 in 1998–99, and has remained at that level. By 2001–02, nursing education programs project only 904 licensed practical nurse graduates.
- The proportion of nurses nearing retirement is increasing dramatically at a time when baby boomers will soon need more health care services. Approximately 63 percent of Michigan registered nurses are 40 years of age or older. Fifteen percent of the current nursing workforce is 55 years of age or older and would be expected to retire within the next 10 years.
- Michigan hospitals report serious difficulties filling vacancies in nursing positions. Fifty-four percent of hospital survey respondents report that it is "extremely difficult" or "very difficult" to fill vacancies for direct care nurses in critical care. Forty-two percent of respondents report the same

level of difficulty filling vacancies in emergency/urgent care and surgery. On the average, it takes 55 days for hospitals to fill a direct care registered nurse position.

- According to the 1998–99 licensure survey, there were only 2,811 licensed nurses in Michigan who were unemployed and seeking employment out of a total pool of 113,414 nurses in the Michigan workforce. This is an unemployment rate for nurses in Michigan of only 2.5 percent, which leads to difficulty in recruiting qualified employees, and results in pressure to increase wages.
- Trends in Michigan are consistent with national and international trends that show the slowdown in the rate of growth in the number of nurses and high levels of dissatisfaction among nurses in the workforce.

Major factors affecting the supply of nurses include the aging of the nurse population, declining enrollments and graduations in nursing education programs, and a poor work environment. These factors are compounded by a lack of value placed on nurses within the health care system. Stressful working conditions and the physical demands of the job are causing nurses to leave the field. One recently released national study reports that one out of five nurses aged 18 to 59 years say they have considered leaving the profession within the past two years and expect to leave within five years for reasons other than retirement.

The study results also point to the need for more information.

- While recent national studies show that the size and mix of nurse staffing in hospitals has a direct impact on health outcomes for patients, there are no standards for either minimal or optimal nurse staffing ratios or nurse-to-population ratios. Guidelines are limited for determining appropriate nurse staff mix in specific situations.
- Data on vacancy rates are limited and difficult to interpret—the same vacancy rate may be manageable in one setting but unmanageable in another setting—and there are no standards for "acceptable or unacceptable" vacancy levels.
- Data are very limited on nursing enrollments and graduations and the demand for nurses in the workforce. Existing models to forecast supply and demand for nurses are inadequate.

In order to improve the supply of nurses the positive aspects of nursing need to be highlighted. The nursing profession continues to rank very high as a trusted profession. Nurses are critical to the delivery of health care services—people are not in the hospital or the nursing home unless they need nursing care. A nursing career offers a variety of work opportunities, flexibility in work schedules, reasonable entry-level pay, and the satisfaction of helping people.

The scope of the study was restricted by time available to complete a report to the legislature. For this reason, the survey on the use of nursing personnel and the focus groups were limited to nurses in the hospital setting. The demand for nurses and the experience of nurses in other settings was not explored. Focus groups were conducted with nurses to gain their perspective, but all stakeholders—including nurses and nursing organizations, employers of nurses, educators, health care payers, legislators and regulators—must be part of the effort to find and implement solutions.

The following recommendations for Michigan are offered as a starting point for discussion among stakeholders on the many issues surrounding the needs of the professional nursing workforce and the public.

- Michigan stakeholders should establish an ongoing collaborative, partnership body to improve data collection and dissemination, develop and implement a forecasting model for the supply and demand and need for nurses, and monitor and implement responses to the changing demand and supply of nursing services.
- Partnerships between nursing schools and employers should be expanded to create a collaborative, statewide approach for improving the work environment and increasing the recruitment of talented women, men, and minorities into the nursing profession.

All stakeholders must play a role in promoting a positive image of nursing and creating a new philosophy that clearly values nurses. This philosophy must be promoted to the public, promulgated within the health care delivery system, and, most importantly, conveyed to nurses in the field.

# Introduction and Methodology

## PURPOSE OF STUDY

In response to direction from the Michigan legislature (Public Act 256 of 2000), the Michigan Department of Consumer and Industry Services (MDCIS) has conducted a study on the current and future needs of the professional nursing workforce in Michigan. This study has been undertaken in conjunction with the Michigan Board of Nursing, the Michigan Nurses Association, the Michigan Organization of Nurse Executives, and the Michigan Health and Hospital Association. The MDCIS contracted with Public Sector Consultants, Inc., a nonpartisan public policy research firm in Lansing, to carry out the study.

Serious concerns have been raised at the national and state level regarding the adequacy of the supply of nurses in the workforce. National experts and providers across the country are reporting a current shortage of nurses and predicting that the situation will become worse over the next decade. Newspaper coverage and health care publications in Michigan have echoed the concern.

The purpose of this study is to

- develop a profile of the current supply of nurses in Michigan (based on available data);
- identify factors affecting the quantity and quality of the nursing workforce;
- review trends in health care delivery and demographics and the implications for the supply and demand for nurses; and
- develop recommendations for further study and policy direction.

The components of the study included

- review and analysis of data provided by the MDCIS on the nursing supply in Michigan;
- focus group discussions with nurses involved in direct patient care, nursing education, and nursing leadership/administration;
- a mail survey of Michigan hospitals/health care systems on their supply of and demand for nursing staff; and
- review of research literature on the national nursing supply.

The scope of the study was limited by the time available to complete the study and prepare a report to the legislature. Since concern regarding the availability of nurses for hospital placement motivated the legislation calling for this study and the majority of nurses work in hospital settings, the survey on the demand for nursing staff was limited to the hospital setting. Other information contained in this report is relevant to the needs of the professional nursing workforce in any work setting.

## SURVEY OF LICENSED NURSES

The Michigan Department of Community Health (MDCH), Division of Vital Records and Health Statistics has conducted periodic surveys of licensed nurses since 1975. The 1992–93, 1996–97, and 1998–99 surveys referenced in this study were coordinated through the MDCIS with data collected as part of the license renewal process for licensed practical nurses and registered nurses in Michigan. Since re-licensure is a biennial cycle, multiple years are required to complete a survey of the entire population

of licensed nurses. Survey data was collected during the spring of the renewal year. Individuals were asked to provide the zip code of their primary employment, current employment status and setting, and education level. The MDCIS licensure files contain additional information on the individual's age and mailing address.

Although completion of the survey portion of the licensure renewal application is voluntary, response rates have been consistently high. In 1998–99, responses were received from approximately 78 percent of licensed practical nurses (LPNs) and 84 percent of registered nurses (RNs) located in Michigan. Because of the high survey response rates, the MDCH has been able to extrapolate the data obtained from the survey to create estimates for all Michigan nurses. Public Sector Consultants, Inc. reviewed and analyzed preliminary data tables supplied by MDCH in order to provide the summary information contained in this report.

## METHODOLOGY FOR FOCUS GROUPS

A total of five focus groups were conducted by Public Sector Consultants, Inc. with nurses involved in direct patient care, nurse educators, and nursing leadership/administration. The participants in the focus groups included members of the Michigan Department of Consumer and Industry Services (MDCIS) Nursing Workforce Steering Committee and other individuals recruited by the MDCIS from Michigan hospitals and nursing education programs. Invitations to participate in the focus groups were mailed to 101 individuals representing 46 hospitals, 32 college and university nursing programs, and 10 professional organizations. A total of 53 people participated in the focus group discussions.

Two of the focus groups consisted of professionals involved in nursing education (e.g., deans, associate deans, and directors of nursing programs). One of these sessions was held with people representing master's programs in nursing (MSN) or baccalaureate programs (BSN) and the other session was held with people representing programs for licensed practical nursing (LPN) or associate's degree programs (ADN).

Two of the focus groups were made up predominantly of staff nurses and first line supervisors from hospitals. Fifteen people (including 11 staff nurses), representing seven hospitals and two state level professional organizations, participated in a session scheduled for staff from southeast Michigan hospitals. Five staff nurses and one supervisor, representing two hospitals, participated in the session scheduled for urban hospitals outside of southeast Michigan. (Another session scheduled for rural hospitals was cancelled due to low registration.)

Seven people, including five hospital directors of nursing, participated in the fifth focus group for individuals involved in nursing leadership/administration.

Each participant was asked to identify what she or he believes to be the most important issues facing nursing in Michigan. (Nurse educators were asked instead to identify the most important issues facing nursing education in Michigan.) Then each group was asked how these issues should be addressed, followed by a series of questions on recruitment of women and men into the nursing profession, preparation of nurses for the practice setting, and support for nurses in the practice setting. The focus groups—although not statistically significant—offer qualitative and anecdotal information that gives vitality to the quantitative survey data and literature review.

## METHODOLOGY FOR SURVEY OF HOSPITALS

The Michigan Department of Consumer and Industry Services (MDCIS), in cooperation with the Michigan Health & Hospital Association (MHA), distributed a survey to human resource directors in

all MHA member hospitals in Michigan. The survey was developed with input from the Michigan Health and Hospital Association, the Michigan Board of Nursing, and the Michigan Nurses Association and requested information on use of nursing personnel within the hospital/health system. Survey recipients were assured that responses from individual hospitals would be kept confidential. Only aggregate information by region or hospital characteristics (e.g., size, rural/urban) is available from the survey.

The survey was mailed to 146 community hospitals[1]. Responses were received from 73 hospitals (a response rate of 50 percent). Responses can be broken down as follows:

- 37 are from small hospitals (fewer than 100 beds), 19 are from medium-sized hospitals (100–299 beds), and 17 are from large hospitals (300 or more beds). Forty-six percent of the state's small community hospitals, 50 percent of the medium-sized community hospitals, and 63 percent of the large community hospitals answered the survey questions.
- 35 rural hospitals (59 percent of the state total) and 38 urban hospitals (44 percent of the state total) responded to the survey.

## REVIEW OF RESEARCH LITERATURE

Public Sector Consultants, Inc. (PSC) reviewed recent research literature, position statements, conference materials, professional journal articles, and newspaper articles on issues related to the quantity and quality of the nursing work force. Some materials were provided by the MDCIS and others were obtained by PSC. Materials cited are identified in the Reference List.

[1]Community hospitals do not include Veteran's Administration hospitals or hospitals providing only psychiatric care.

# PROFILE OF SUPPLY OF NURSES IN MICHIGAN[2]

## NUMBER OF NURSES

The total estimated number of *active*, licensed nurses located in Michigan increased by 326, up from 105,869 in 1996–97 to 106,195 in 1998–99. [Exhibit 1] This is *less than a ½ percent increase in two years* in the number of active, licensed nurses (RNs and LPNs), compared to an 11 percent increase in the four years between 1992–93 and 1996–97.

**EXHIBIT 1**
**Summary of Results from Michigan Licensure Surveys**

| | 1992–93 | 1996–97 | 1998–99* |
|---|---|---|---|
| Total number of nurses licensed by Michigan (RNs & LPNs) | 137,436 | 147,501 | 142,328 |
| Active RNs and LPNs in Michigan (estimated) | 95,341 (69.4% of of licensed) | 105,869 (71.8% of licensed) | 106,195 (74.6% of licensed) |
| Inactive RNs and LPNs in Michigan (estimated) | 22,191 | 21,895 | 18,761 |
| Employed in non-nursing | 4,470 | 4,672 | 4,408 |
| Unemployed | 2,830 | 3,278 | 2,811 |
| Not seeking employment | 14,891 | 13,945 | 11,542 |
| Licensed RNs & LPNs located out of state | 19,904 | 19,737 | 17,372 |
| MI ratio of nurses per 100,000 population (includes active RNs & LPNs) | 1004 | 1085 | 1079 |
| Total number of licensed RNs | 103,226 | 114,630 | 112,709 |
| RNs active in Michigan (estimated) | 71,409 | 82,159 | 83,800 |
| Inactive RNs in Michigan (estimated) | 14,912 | 15,394 | 13,623 |
| Licensed RNs located out of state | 16,905 | 17,077 | 15,286 |
| MI ratio of RNs per 100,000 population | 752 | 842 | 851 |
| Total number of licensed LPNs | 34,210 | 32,871 | 29,619 |
| LPNs active in Michigan (estimated) | 23,932 | 23,710 | 22,395 |
| Inactive LPNs in Michigan (estimated) | 7,279 | 6,501 | 5,138 |
| Licensed LPNs located out of state | 2,999 | 2,660 | 2,086 |
| MI ratio of LPNs per100,000 population | 252 | 243 | 228 |

SOURCE: MDCIS Licensure Surveys.
*Preliminary data from 1998-99 survey of nurses.
**Nurse/population ratios are calculated using updated population estimates based on the United States Census 2000 available from the Michigan Department of Management and Budget Michigan Information Center at www.state.mi.us/dmb/mic
Michigan surveys of licensed nurses have been conducted periodically through the Department of Consumer and Industry Services with reports prepared by the Division of Vital Records and Health Statistics, Michigan Department of Community Health.

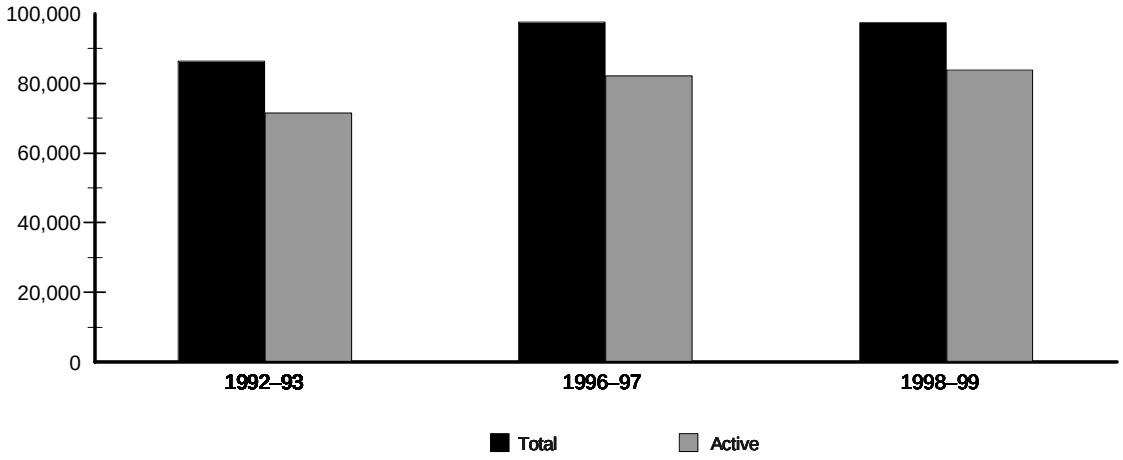
- The number of active registered nurses increased by 1,641—from 82,159 in 1996–97 to 83,800 in 1998–99—an increase of 2 percent in two years. [Exhibit 2] This rate of growth is slower than the national growth rate in the number of RNs. Preliminary findings from the National Sample Sur-

[2]All data on the supply of nurses in Michigan are from the MDCIS survey of nurses completed as part of the license renewal process, unless otherwise noted. The survey data for 1998–99 are preliminary data. The 1998–99 survey data do not include temporary licenses granted in 2000.

vey of Registered Nurses 2000 show a 5.4 percent increase in the number of RNs in the four-year period between 1996 and 2000, the lowest increase reported for the country since the since the study was initiated in 1975. (Health Resources and Services Administration [HRSA], 2001)

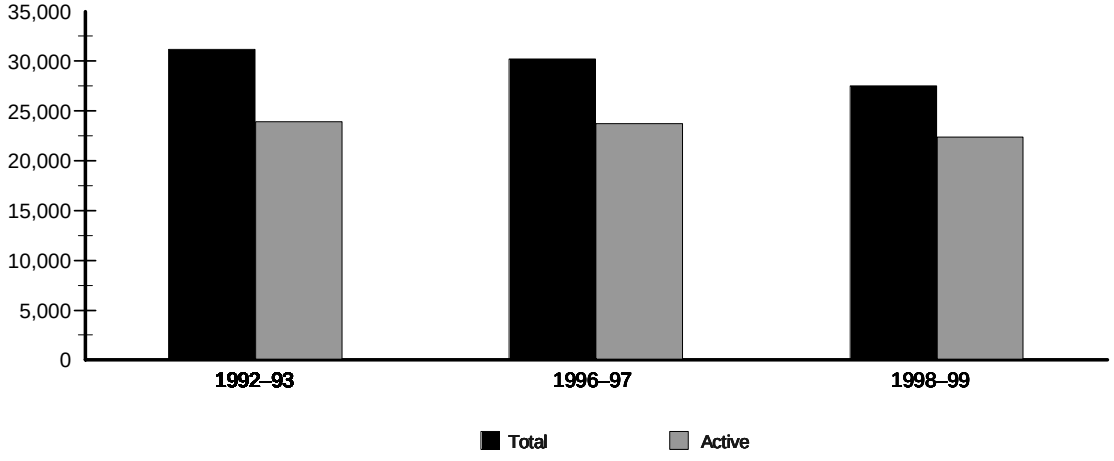
- The number of active licensed practical nurses in Michigan decreased by 1,315—from 23,710 in 1996–97 to 22,395 in 1998–99—a decrease of 5.5 percent. [Exhibit 3]

**EXHIBIT 2**
**Registered Nurses in Michigan**
**Total Number Licensed and Number Active, by Year**




SOURCE: MDCIS Licensure Surveys.

**EXHIBIT 3**
**Licensed Practical Nurses in Michigan**
**Total Number Licensed and Number Active, by Year**




SOURCE: MDCIS Licensure Surveys.

The *total* number of nurses licensed by Michigan (including both active and inactive RNs and LPNs) decreased in 1998–99 after increasing up until 1996–97.

- The total number of nurses licensed by Michigan decreased from 147,501 in 1996–97 to 142,328 in 1998–99, a decrease of 3.5 percent.
- The decrease occurred mainly among nurses licensed in Michigan but *located out of state* and among nurses licensed and located in Michigan but *inactive* in nursing.
- The decrease in the number of active LPNs also contributed to the decrease in the total number of licensed nurses in Michigan. The total number of LPNs peaked in 1988 at 37,036 and has declined steadily since.

The pool of nurses who are licensed and located in Michigan but *inactive* in nursing declined from 22,191 in 1992–93 to 18,761 in 1998–99. A possible explanation for this is that nurses who are not seeking employment may let their license lapse rather than try to meet the continuing education requirements for licensure. Yet the majority of inactive nurses who are licensed (11,542) still report that they are not seeking employment. Twenty-three percent of inactive licensed nurses (4,408) report that they are employed in non-nursing positions. This number has remained fairly level since 1992–93. Only 2,811 inactive nurses report that they are seeking employment—an unemployment rate of 2.5 percent—but the data do not distinguish whether these nurses are seeking employment in a non-nursing or nursing field.

As of May 1, 2001, there are 254 nurses who hold temporary licenses to practice in Michigan.

## RATIO OF POPULATION TO NURSES

While the number of active nurses in Michigan increased by approximately .4 percent, the state population increased by approximately .8 percent. As a result, the ratio of active nurses to population in Michigan decreased from 1,085 nurses per 100,000 population in 1996–97 to 1,079 nurses per 100,000 population in 1998–99. This is the first decrease recorded in the nurse/population ratio since surveys were initiated in Michigan in 1975. The nurse to population ratio includes *both* LPNs and RNs who are employed in nursing full-time or part-time. Approximately 65 percent of active LPNs and 68 percent of active RNs are employed full-time, and these percentages have not changed since 1992–93.

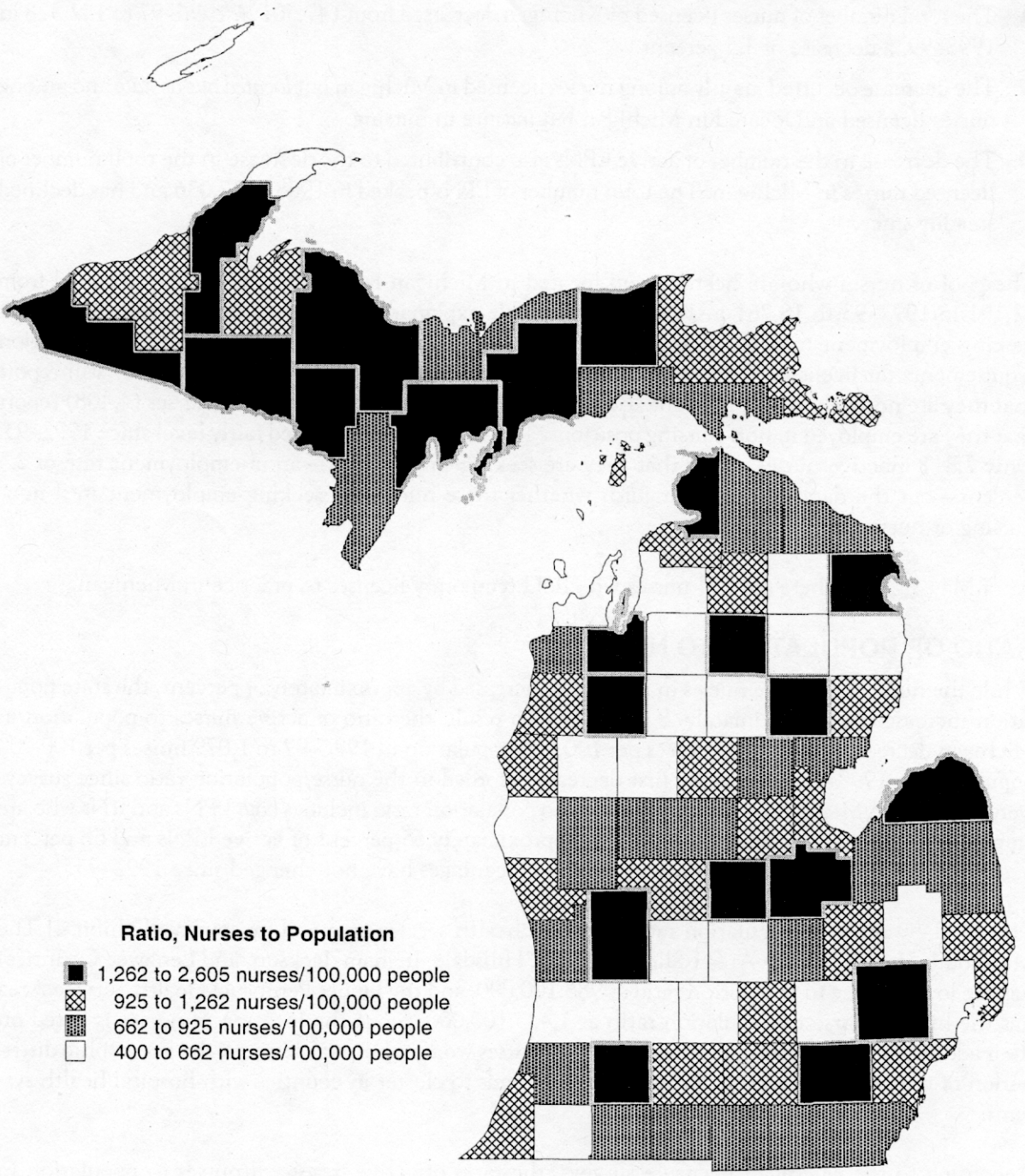
The 1998–99 nurse to population ratio varies by health service area and by county. [Exhibit 4] The Mid-South Health Service Area (Clinton, Eaton, Hillsdale, Ingham, Jackson, and Lenawee Counties) has the lowest nurse to population ratio at 988:100,000, and the Upper Peninsula Health Service Area has the highest nurse to population ratio at 1,423:100,000. Since the location of nurses is based on their address of employment and the majority of nurses work in hospital settings, the geographic distribution of nurses within each health service area tends to cluster in counties with hospital/health systems.

According to the Michigan licensure surveys, the ratio of active, *registered* nurses to population in Michigan has increased since 1996–97, from 842 registered nurses for every 100,000 people to 851 registered nurses in 1998–99. However, the ratio of active LPNs has decreased since 1996–97, from 243 LPNs for every 100,000 people to 228 LPNs for every 100,000 people in 1998–99.

Different states have different capacities for data collection regarding the nursing workforce. In order to compare the situation in Michigan to other states and the country, it is necessary to use data collected uniformly, such as data from the National Sample Survey of Registered Nurses (NSSRN), conducted

## EXHIBIT 4

### Active Nurses to Population for Michigan Counties 1998-1999*




*Nurses are located by zipcode of employment if recorded on the license survey, otherwise, the zipcode of the nurse's mailing address is used. Ratios and mapping are based on preliminary data from the 1998-1999 license survey compiled by the Michigan Department of Community Health for the Michigan Department of Consumer and Industry Services.

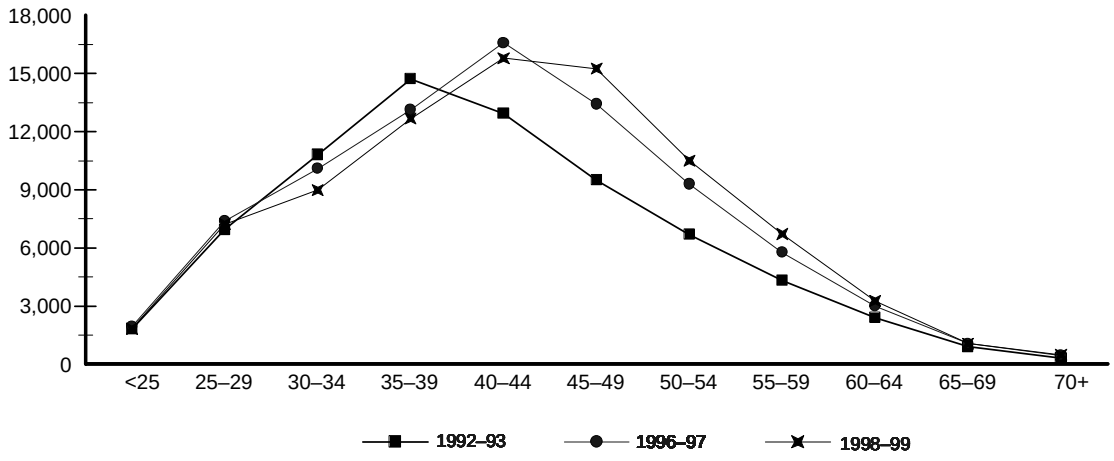
in March 2000. The survey report includes ratios for each state as well as a national average.[3] The NSSRN estimates a ratio for Michigan of 798 registered nurses per 100,000 population. Michigan's ratio from the NSSRN is only slightly better than the national average of 782 registered nurses per 100,000 population. Some states that are mobilizing to address their documented shortage of nurses actually have more nurses per capita than Michigan. Their nurse-population ratio estimates from the NSSRN are higher than Michigan's (e.g., New Jersey is estimated to have 800 nurses per 100,000 population, Maryland 856, and New York 843). California has the second lowest ratio in the country at 544 nurses per 100,000 population. Nevada has the lowest ratio, with 520 nurses per 100,000 people. (HRSA, 2001)

## AGE OF NURSES

Since 1992–93, the number of Michigan nurses less than 30 years of age has remained relatively constant while the number of nurses 40 years of age or older has increased. [Exhibits 5 and 6] This change in age distribution has been documented at the national level and is now widely referred to as the "aging of the nurse population." The proportion of active, licensed nurses nearing retirement has increased for both RNs and LPNs in Michigan. [Exhibits 7 and 8]

- Approximately 63 percent of RNs are over 40 years of age or older compared to 52 percent in 1992–93.
- Approximately 71 percent of LPNs are over the age of 40 compared to 61 percent in 1992–93.

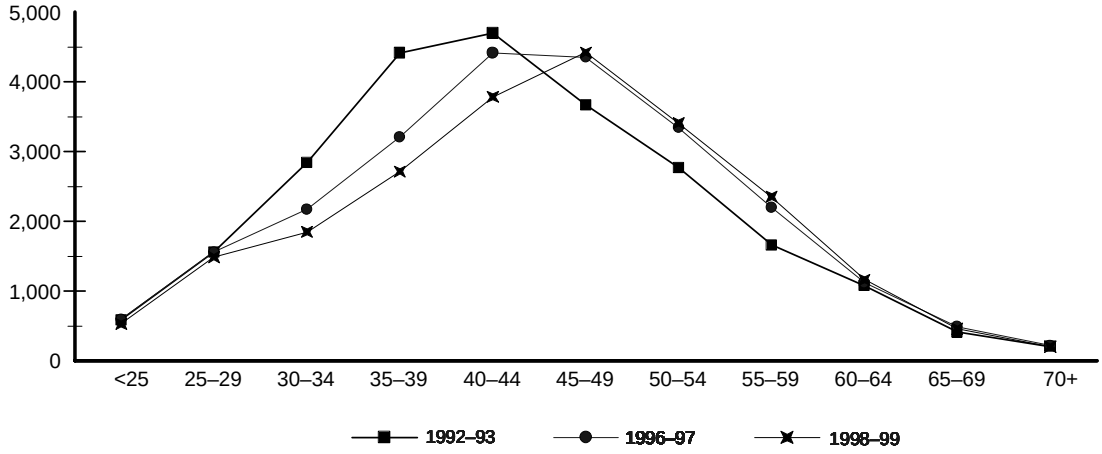
**EXHIBIT 5**
**Distribution of Active Registered Nurse Population in Michigan, by Age**




SOURCE: MDCIS Licensure Surveys.

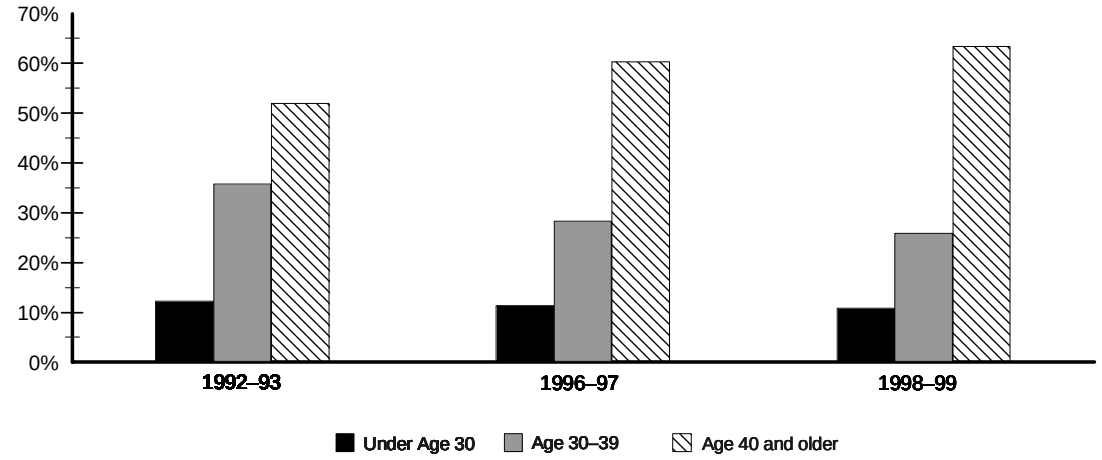
[3]The Health Resources and Services Administration (HRSA) conducts the National Sample Survey of Nurses every four years. Findings for Michigan are based on the survey conducted in March 2000 with a sample of 669 registered nurses in Michigan. The 1998–99 MDCIS licensure survey findings are based on the surveys conducted in the spring of each year with a 1998–99 response rate of 83.56 percent of all registered nurses licensed and located in Michigan (81,405 responses).

## EXHIBIT 6
**Distribution of Active Licensed Practical Nurses in Michigan, by Age**




SOURCE: MDCIS Licensure Surveys.

## EXHIBIT 7
**Proportion of Active Registered Nurses in Michigan, by Age**




SOURCE: MDCIS Licensure Surveys.

- Based on the 1998–99 licensure survey, 15,697 active nurses are 55 years of age or older. This figure includes 11,514 licensed, active RNs and 4,183 active LPNs. Almost all of these nurses—15 percent of the current workforce—can be expected to retire within the next 10 years.

Trends in the age distribution of the Michigan nurse population are consistent with the national trend. The average age of registered nurses employed in nursing in the United States increased from 42.3 years in 1996 to 43.3 in 2000. Health Resources and Services Administration (HRSA) data show 68.3

**EXHIBIT 8**
**Proportion of Active Licensed Practical Nurses in Michigan, by Age**


SOURCE: MDCIS Licensure Surveys.

percent of registered nurses in the United States are now 40 years of age or older compared to 1980 when 47 percent were 40 years of age or older. In 2000, 18.3 percent of RNs were under the age of 35, compared to 40.5 percent in 1980. (HRSA, 2001)

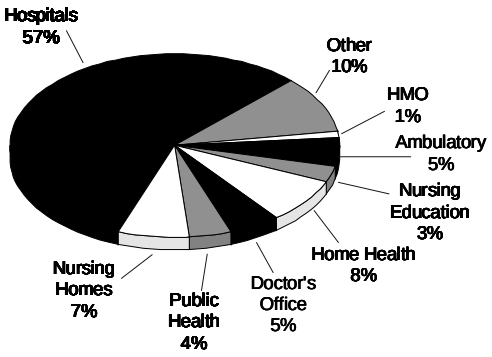
## WORK SETTING

The majority of registered nurses in Michigan, 63.5 percent, are employed in the hospital setting. [Exhibit 9] This proportion has decreased since 1992–93, when 70.9 percent of RNs were employed in the hospital setting. The proportion of LPNs employed in hospitals also decreased (from 44.4 percent to 32.3 percent in 1998–99). [Exhibit 10] During the same time period, the proportion of RNs and LPNs employed in nursing homes, doctor's offices, ambulatory care, and "other" settings increased. The proportion of nurses employed in home health increased significantly in 1996–97 and then declined slightly in 1998–99. [Exhibit 11] The proportions of nurses employed in public health (5 percent) or nursing education (3.7 percent) have remained essentially level since 1992–93.

## EDUCATION LEVEL OF REGISTERED NURSES

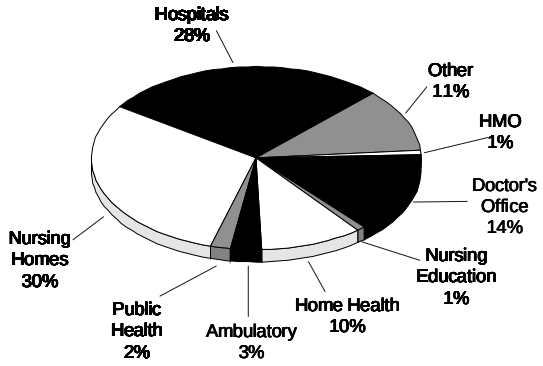
Registered nurses responding to the MDCIS 1998 licensure survey were asked to indicate their level of education (i.e., all degrees completed). Approximately 21 percent of active, licensed registered nurses have a diploma in nursing as their highest degree, 42 percent received an associate's degree in nursing as their highest degree, 32 percent have a bachelor's degree, 5 percent have a master's degree, and less than ½ percent (.2 percent) have a doctorate. The proportion of active registered nurses with a diploma as their highest degree has decreased significantly since 1992–93 (from 28 percent to 21 percent). The proportions of registered nurses with associate's, bachelor's or master's degrees as their highest degree have increased by one or two percentage points during the same period. Older registered nurses are more likely to hold a diploma as their highest degree (47 percent of registered nurses ages 55 years and older have a diploma in nursing, 28 percent have an associate's degree, and 18 percent have a bachelor's degree). Younger nurses are more likely to have a bachelor's degree as their highest degree (56 percent of registered nurses under the age of 30 have a bachelor's degree, 34 percent have an

## EXHIBIT 9
**Employment Settings of RNs, 1998–99**




SOURCE: MDCIS Licensure Surveys.

## EXHIBIT 10
**Employment Settings of LPNs, 1998–99**




SOURCE: MDCIS Licensure Surveys.

associate's degree, and 9 percent have a nursing diploma). Nurses ages 35 years to 54 years are more likely to have an associate's degree as their highest degree (46 percent have an associate's degree, 30 percent have a bachelor's degree, and 18 percent have a nursing diploma).

Information on specialty certifications of nurses was not obtained through the 1998–99 MDCIS licensure surveys. Based on the 1997 survey, there were 3,186 registered nurses with specialty certification. Of this total, 1,751 (55 percent) were nurse anesthetists, 1,246 (39 percent) were nurse practitioners, and 209 (7 percent) were nurse midwives. The percentages total more than 100 percent because some nurses hold multiple certifications. The majority of the nurses holding specialty certifications in 1977 were located in Southeast Michigan (53 percent of the nurse practitioners, 67 percent of nurse anesthetists, and 44 percent of the nurse midwives). (Michigan Department of Consumer and Industry Services, 1999)

## EXHIBIT 11
### Trends in Distribution of Nurses, by Worksetting

| | Percent of Active RNs by Selected Work Settings | | | Percent of Active LPNs by Selected Work Settings | | |
|---|---|---|---|---|---|---|
| | 1992–93 | 1996–97 | 1998–99 | 1992–93 | 1996–97 | 1998–99 |
| Hospital | 70.86 | 64.45 | 63.45 | 44.39 | 35.39 | 32.25 |
| Nursing home | 5.81 | 7.49 | 7.65 | 31.11 | 34.09 | 34.36 |
| Home health | 6.89 | 10.38 | 8.98 | 9.65 | 12.45 | 11.24 |
| Doctor's office | 4.81 | 5.14 | 5.73 | 12.62 | 14.25 | 15.71 |
| Ambulatory | 3.93 | 4.70 | 5.16 | 2.69 | 2.83 | 3.24 |
| Other* | 9.50 | 8.87 | 11.57 | 9.00 | 8.16 | 12.05 |

SOURCE: MDCIS Licensure Surveys.
*MDCIS Licensure Survey respondents were given the option of writing in other work settings not listed as choices on the survey form. Examples of other work settings listed by respondents include school, industrial/occupational, hospice, residential facilities, jail/correctional facility, Red Cross/blood service, dialysis, parish health, and ambulatory clinic settings (which should have been listed under the option of ambulatory care).

## RACIAL/ETHNIC BACKGROUND AND GENDER

Data on racial/ethnic and gender characteristics of the nursing population are not available from the MDCIS licensure surveys. Preliminary findings from the March 2000 National Sample Survey of Registered Nurses estimate that 86.6 percent of the country's registered nurse population reported being white (non-Hispanic) and 12.3 percent reported being in one or more of the identified racial and ethnic minority groups. (HRSA, 2001)

The national survey shows that more men are entering nursing. Between 1996 and 2000, the percentage of men in the registered nurse population increased from 4.9 percent to 5.4 percent.

# Factors Affecting the Supply of Nurses

The supply of nurses is influenced by complex factors. In the past, the supply of nurses has responded to cyclical changes in the demand for nursing services. When employers have reduced their nursing staff, the scarcity of full-time positions has driven nurses to find other positions in nursing or in other occupations, and, at the same time, prospective students enter other disciplines. In this way, a perceived surplus leads to a shortage of nurses at some point in the future, followed by intense efforts to resolve the shortage, which in turn lead again to a perceived surplus. In the last few years, researchers and professionals have recognized that the current and future supply of nurses has been and is affected not only by cyclical fluctuations, but also by the demographics of the nursing population, declining enrollments in nursing education programs, and the work environment.

## AGING OF THE NURSING POPULATION

In this study, all of the focus groups conducted with nurses involved in direct patient care, nursing education, and nursing leadership/administration mentioned the aging or "graying" of the nursing population as one of the most important issues facing nursing in Michigan.[4] Nurses in the field pointed out that the workforce is aging. They warned that, with more nurses nearing retirement than there are nurses entering the profession, "a calamity awaits." Nurse educators noted that nursing faculty also are aging and the pool of qualified candidates for faculty positions is decreasing.

The change in age distribution of the registered nurse population—a larger proportion of nurses in older age brackets—has been widely reported in the last five years. Buerhaus and colleagues (2000) predict that by 2010 the average age of registered nurses will be 45.4 years, with more than 40 percent of the registered nurse workforce expected to be older than 50 years of age. Based on analysis of annual Current Population Survey data, Buerhaus states that in the short term we can expect an aging workforce as the largest age cohorts of nurses (ages 40 to 45 years) grow older. In the longer term the workforce will shrink as the largest age cohorts retire and are replaced by smaller age cohorts.

Buerhaus' analysis shows that the largest numbers of registered nurses were born in the 1950s, reflecting the baby boom (i.e., large overall population) and the high propensity of women born around 1955 to choose nursing as a career. In the 1980s, when these nurses were in their twenties and thirties, the registered nurse workforce was dominated by young women. Future age cohorts (women born after 1955) were much less likely to choose nursing as a career. Between 1983 and 1998, the number of working registered nurses under age 30 decreased from 419,000 to 246,000 nationally—a 41 percent decline. In contrast, over the same time period, the number of working people in the United States under 30 decreased by only 1 percent. Now nurses in their forties dominate the workforce and outnumber nurses in their twenties by nearly 4 to 1. (Buerhaus, 2000)

The aging of the nurse population has implications for the capacity of the nursing workforce, both in terms of numbers of full-time equivalent nurses and physical ability to carry out specific tasks (e.g., lifting and moving patients). Both of these factors will aggravate any shortage in the number of nurses. Since workforce participation declines with advancing age, the number of full-time equivalents is expected to decrease as older nurses choose to work fewer hours or retire. Older workers are generally less likely to suffer work place injuries, but when they do they recover more slowly than younger workers and are less likely to return to work. Older workers are more prone to back injuries, stress and

[4]A complete summary of the focus group discussions is available in Attachment A.

cumulative trauma disorders. But it is also important to note that older workers consistently receive high ratings on key job skills, loyalty, reliability, and lack of turnover and absenteeism. (State Accident Insurance Fund [SAIF], 1995) Peterson (2001) notes that very little research has been done, particularly within nursing, about the impact of the aging workforce and potential accommodations that may need to be made in order to retain the experienced nurse.

Peterson also points out that nursing may not be able to "educate its way out of a nursing shortfall" this time because one of the most critical problems facing nursing and nursing workforce planning is the aging of nursing faculty. According to an American Association of Colleges of Nursing (AACN) 1998 *Issue Bulletin*, the average age of full-time nursing faculty was 49 years and 4 months in the fall of 1997, an increase of more than a year since 1994. Nursing school associate professors and assistant professors were an average age of 52.1 and 48.5 years, respectively. (Mezibov, 1998) The problem is also apparent at the doctoral level where, in 1996, the average age of new doctoral recipients was 45 years. Peterson points out that flat enrollment in doctoral programs that produce nurse educators will have an impact on the capacity of nursing schools to educate sufficient numbers of registered nurses to meet the future demand. In other words, as older faculty members retire, there may not be enough teachers in nursing programs even if more students are recruited to the profession.

## ENROLLMENTS AND GRADUATIONS IN NURSING EDUCATION PROGRAMS

There are three major types of educational programs for registered nurses: an associate's degree in nursing (ADN), a Bachelor of Science or baccalaureate degree in nursing (BSN), and a diploma in nursing. Associate's degree programs are offered by community and junior colleges and usually take about two years to complete. Bachelor of Science programs, offered by colleges and universities, usually take four or five years to complete. Diploma programs are offered by hospitals and take two to three years to complete. There are no longer any diploma programs offered in Michigan.

Licensed practical nurse programs are offered by community and junior colleges and usually take one year to complete as a stand-alone program. LPN programs also are offered as a ladder program—the first year of course work leads to the LPN degree and also counts toward completion of an ADN.

Focus groups of nurse educators identified a decline in students interested in enrolling in the nursing profession and a shortage of nursing faculty as the most important issue facing nursing education in Michigan. They attribute the decline of students to the increase in more attractive, competing career options for women and a negative image of nursing as a career. They said nursing is not considered a career of choice for the best and brightest students. The seriousness of the image problem was dramatized when one participant asked the staff nurses and first line supervisors in one focus group to raise their hands if they would encourage their daughters to go into nursing—and not one nurse raised her hand.

In previous years, the American Association of Colleges of Nursing (AACN) has attributed a continuing decline in enrollments in baccalaureate degree programs largely to lower interest in nursing careers and cutbacks due to faculty shortages, limited supply of clinical training sites, and mandated caps on enrollments. The AACN cited two reasons for the waning interest in nursing careers: the increasing number of career opportunities for women, and a perception that nursing is not a secure job given widespread cost-cutting within the health care system. (Frase-Blunt, 2000) Bednash suggests that the system of nursing education that provides graduates of three different levels of nursing programs with the same license and role expectations creates a major disincentive to attracting an adequate supply of BSN-educated registered nurses for the future. She notes that nurse educators consistently report that potential BSN students were discouraged from pursuing a nursing career by the confusing array of

entry-level options available. (Bednash, 2000) Some nurse educators and staff nurses in the focus groups also suggested that multiple levels of nursing education programs and degrees results in confusion and less respect from both the public and physicians for nursing as a profession.

In a survey conducted by the MDCIS in May 2001, nursing education programs in Michigan show a decline in the number of registered nursing program *graduates* from 3,293 in 1997–98 to 3,112 in 1999–00. The number of graduates from ADN programs has declined steadily. The number of graduates from BSN programs has fluctuated, declining by 4 percent one year and increasing by 4 percent the next year. Declines are projected for 2000–01 and 2001–02 in the number of graduates from both ADN and BSN programs. By 2001–02, nursing programs project only 2,699 registered nursing program graduates. The number of graduates from programs for licensed practical nurses also decreased, from 967 in 1997–98 to 934 in 1998–99, and has remained at that level. By 2001–02, nursing education programs project only 904 licensed practical nurse graduates. [Exhibit 12]

**EXHIBIT 12**
**Michigan RN and LPN Graduates, 1997–2002**

| | 1997–98 | 1998–99 | 1999–2000 | 2000–01* | 2001–02* |
|---|---|---|---|---|---|
| LPN Graduates | 967 | 934 | 935 | 951 | 904 |
| RN Graduates: | | | | | |
| ADN | 1,886 | 1,764 | 1,708 | 1,640 | 1,397 |
| BSN | 1,407 | 1,346 | 1,404 | 1,190 | 1,302 |
| Total RN Graduates | 3,293 | 3,110 | 3,112 | 2,830 | 2,699 |

SOURCE: MDCIS Survey of Nursing Education Programs, May 2001.
*Estimates provided by nursing programs.

The AACN has reported declines in *enrollment* of nursing students in entry level bachelor's degree programs for six consecutive years in the United States. The rate of decline in entry-level bachelor's and master's programs is slower than previous years, which may indicate that declines are moderating. In the fall of 1999, enrollment in entry-level baccalaureate nursing programs decreased by 4.6 percent from the year before. In the fall of 2000, the number of students enrolling in bachelor degree nursing programs fell by 2.1 percent and master's degree enrollments decreased by 0.9 percent compared to 1999. Declines in entry-level baccalaureate degree program enrollments were seen in every region except the West in the fall of 2000. Midwest schools had the largest decline at 4.7 percent. Meanwhile, master's degree program enrollments increased in some regions. The number of master's degree enrollments increased slightly, by 0.7 percent, in Midwest schools. (American Association of Colleges of Nursing [AACN], 2001) The AACN suggests that this year's moderation in declining enrollments and graduations may be the result of "widespread media coverage of the emerging nursing shortage" as well as better communication with potential students regarding the rewarding professional opportunities in contemporary nursing.

The AACN reports that the number of doctoral nursing program enrollments rose by 2.5 percent in fall 2000, after essentially flat growth for the previous five years. (AACN, 2001) The doctoral degree is the "appropriate and desired" credential for nurse educators, according to the AACN. It takes longer for most nurses to obtain the doctoral degree than counterparts in other fields, due to the tradition of encouraging students to work between degrees. In 1998, deans of nursing programs called for "steeper gains (in doc-

toral nursing graduates), younger recruits, and faster production time" to meet the need for doctorate-prepared faculty. (Mezibov, 1998) However, increasing numbers of doctorate-prepared nurses alone does not necessarily solve the shortage. In 1998, 411 people graduated from doctoral programs in nursing according to AACN data, but only 43 percent of those had an employment commitment to serve as nursing school faculty. Another 17 percent had accepted non-academic positions. (Frase-Blunt, 1999)

## WORK ENVIRONMENT

All five focus groups identified a poor work environment as a major issue, which in turn leads to a poor image of nursing as a career, and makes it difficult to increase enrollments and recruit and retain registered nurses. The comments made by nurses were consistent across focus groups and troubling, for example:

- The work environment is chaotic and nurses get too little support from other health professionals and personnel.
- Long shifts, often with mandatory overtime, are a big problem.
- Paperwork is horrendous and time consuming.
- The demands of an aging patient population are greater (i.e., increased acuity[5]).
- Patients have shorter lengths of stays, but they are generally sicker—and heavier, too.
- Nurses have less time for teaching and critical thinking that defines nursing.
- Nurses are forced to be a "jack of all trades," including taking on non-nursing tasks.
- The difficult work environment drives nurses from the bedside and even out of nursing altogether.

According to a recent study by William M. Mercer, Inc. (2001), nurse turnover is a problem nationwide, and workload/staffing is cited by 43 percent of health care employers as a primary reason for nurse turnover, second only to increased market demand. Similar results are available in other recent study reports. In a national opinion research survey of current direct care registered nurses, half of the current nurses say they have considered leaving the patient care field for reasons other than retirement. One out of five nurses aged 18 to 59 years have considered leaving within the past two years *and* expect to leave the field within five years. The top reason why nurses have considered leaving the patient care field for non-retirement reasons is to have a job that is less stressful and less physically demanding. (Peter D. Hart Research Associates, 2001) In the *American Nurses Association Staffing Survey* of nearly 7,300 registered nurses, 56 percent of the nurses surveyed believe that their time available for direct patient care has decreased. Nearly 40 percent of the respondents indicated they felt "exhausted and discouraged" when they leave work, with another 3,222 feeling "discouraged and saddened by what they couldn't provide for their patients." (Cornerstone Communications Group, 2001) Speaking before the Senate Health, Education, Labor, and Pensions Committee's Subcommittee on Aging, Kathryn Hall, Executive Director of the Maryland Nurses Association, said mandatory overtime is the most common method facilities use to cover staffing insufficiencies. She reported that nurses frequently complain that they are coerced into working extra shifts (regardless of their fatigue levels) by managers who threaten to dismiss them for insubordination or report them to the state nursing boards for patient abandonment. Hall said nurses are in a unique situation, "We are ethically bound to refuse to engage in behavior that we know could harm our patients. At the same time, we face the loss of our licenses, our careers, and our livelihoods, when charged with patient abandonment." (Bureau of National Affairs [BNA], 2001)

[5]The term acuity is being used within the profession to mean the intensity of care required to address patients' acute health care needs.

Focus group participants said the poor work environment is compounded by a lack of value placed on nurses within the health care system. Nevidjon and Erickson (2001) agree that the public—and the health care delivery system— undervalue nursing, as is the case with other predominantly female professions. They point out that the role of a nurse often is defined in relation to the physician and may still carry the image of "handmaiden." This lowered status shows up in other indicators of the "value" of nursing to society, such as the funding provided for nursing education, the compensation nurses receive relative to the responsibilities of the job, and the work environment that nurses endure. Focus group participants made the following comments regarding the lack of value placed on nurses:

- The pay scale and benefits provided to nurses are not commensurate with the difficulty of work, commitment required, level of responsibility, and liability.[6]
- There is often no differentiation in compensation for different degree preparation.
- There is no mentoring or support for newly hired nurses. One nurse commented that "newly hired workers in the automobile industry receive more on-the-job training and supervision than newly hired nurses."
- There is an absence of career ladders.
- Nurses are not included in administrative decision-making.
- Unlike other health professional services, nursing services are not billed independently—only treated as "part of the room rent."

Yet the nursing profession continues to rank very high as a trusted profession in the U.S., above physicians and other healthcare workers. At the same time, the public is hearing about the stress that nurses experience and the shortage of staff in hospitals. Images of striking nurses, hospital downsizing because of managed care, and stories of nursing errors, result in nursing appearing as an unstable, unpredictable and high-risk career option. (Nevidjon and Erickson, 2001)

Unfortunately, a negative work environment becomes part of a vicious cycle; inability to recruit and retain nurses exacerbates shortages of nurses and leads to further deterioration in the work environment. As one participant in the focus groups put it, "The career itself—the workload—is turning away students." Or as Peterson says, "The reality is that the profession of nursing will be unable to compete with the myriad of other career opportunities unless we improve working conditions, increase compensation over the lifetime of the registered nurse, and provide clinical practice opportunities and responsibilities that match the registered nurse's knowledge and skill."

## PREPARATION OF NURSES

Two of the focus groups mentioned the need for better preparation of nurses as a major issue even before they were asked directly about the adequacy of preparation for nurses. Specifically, they said that new nurses entering the workforce are not well prepared for the demands of the workload and acuity level of patients. The nurse educators and some staff nurses believe that nursing students overall are well prepared for general medical/surgical care. But many participants suggested that even good nursing students aren't ready for acute care hospital work. As one nurse said, "No matter what program they graduate from, they still need time to learn." New nurses need to receive mentoring or internships to assist with the transition to work and should not be expected to "hit the ground running." Some focus group participants noted that both

[6]Nationally, "real" salaries of registered nurses (actual average annual earnings adjusted for changes in the purchasing power of the dollar) have remained relatively flat since 1992. (Registered)

nursing students and employers have unrealistic expectations that nurses will be ready to move into management positions or specialty areas immediately after obtaining a degree.

Peterson emphasizes that "nursing must continue to examine the ways in which new nurses are introduced into the nursing work culture. Adequate orientation, mentoring, and preceptor programs are absolutely essential to both introducing and retaining new nurses. Many facilities eliminated these programs for reasons associated with cost during reorganization efforts. This has proven to be very short-sighted as facilities are now working to rebuild these programs." Peterson goes on to say, "As facilities reestablish preceptor programs, consideration must be given to how these programs can serve a nurse throughout an entire career and provide the guidance needed to move into specialty areas. Career progression has been identified as one of the 'qualities' of a workplace that is valued by registered nurses."

Nurse educators in the focus groups compared the preparation of associate's degree nursing students (ADN) and baccalaureate degree nursing students (BSN). They noted that graduates of BSN programs usually have more critical analysis skills, while all new graduates are well prepared for "med-surg" (medical/surgical care) or long-term care but not for specialty areas. The educators raised the question whether it is appropriate to expect ADN program graduates to perform in the same capacity as a BSN graduate. Bednash refers to a 1995 joint report in which the American Association of Colleges of Nursing, National Organization for Associate Degree Nursing, and American Organization of Nurse Executives determined that real differences exist between ADN and BSN educational experiences and the competencies achieved in these programs. She recommends that decisions regarding nursing skill mix, differentiated roles or salaries, and the appropriate regulatory mechanisms to validate knowledge and competencies should be based on a clear analysis of the health care system's requirements for nursing care.

Staff nurses in the focus groups commented on the preparedness of nursing graduates for the practice setting, but nurse educators took this concern to another level and expressed serious concern about the caliber of *incoming* nursing students. While nursing program directors made it clear they have not lowered standards for admission, they said the decline in applicants for nursing programs has resulted in acceptance of applicants that are not as well qualified as in the past. These incoming nursing students lack strong reading, mathematics, and writing skills that are necessary for success in a nursing program. Because the incoming students are not as strong academically, more faculty time is necessary to assist students, which places an additional strain on the supply of faculty.

# Need and Demand for Nurses in Michigan

## HOW MUCH IS ENOUGH?

In order to determine if the current or future supply of nurses is adequate, it is necessary to measure the demand/need for nursing services and compare it to the supply. In simplest terms, if the demand/need is greater than the supply, a shortage exists. If the supply is greater than the demand/need, a surplus exists. But finding the answer is a daunting, if not impossible, task. The "demand" and the "need" for nursing services are distinct, but interrelated, components in the equation between supply and demand.

The demand for nursing services can be defined in economic terms as the number of nursing services (e.g., full-time equivalent nurses) that would be paid for by employers if they were not constrained by the availability of nurses. The number of nursing services that employers pay for is influenced by a complex array of factors. The factors affecting demand include many population characteristics (e.g., health status, demographic characteristics, economic status, insurance coverage) as well as characteristics of the health care delivery system (e.g., number of inpatient days, managed care penetration, outpatient visits, levels of reimbursement, availability and utilization of other health care workers). To forecast the demand for registered nurses, the Health Resources and Services Administration (HRSA) has developed a model that combines multiple factors on the rate of consumers' use of health services, the nursing services "demanded" by employers in the past in order to deliver the services, population estimates, and adjustments for the availability of nurses in the workforce. Using this model, HRSA has projected that the national supply of registered nurses will hover just above the level of demand until 2008, when the demand will begin exceeding the supply. After 2008, the gap between the supply and requirement for registered nurses widens rapidly. By 2020, according to HRSA projections, the projected national requirement for full-time equivalents of registered nurses will exceed the supply by about 13 percent. (Fritz, 1999) Comparing his projections for the supply of nurses to HRSA-estimated requirements for registered nurses, Buerhaus predicts that the size of the registered nurse workforce in the United States will fall almost 20 percent below requirements by the year 2020. (Buerhaus, 2000) Notably, Reinhardt (2000) has cautioned against putting too much stock in long-range health workforce forecasts. He points out that the variables going into a health workforce forecast are so numerous and unpredictable, that most workforce forecasts are too tenuous "for the execution of sensible health workforce policy." He suggests that long-range forecasts do little harm if they are viewed "merely as intellectual 'what if' exercises that might suggest glaring future imbalances."

To further complicate the issue, the model used by HRSA to forecast the current and future requirements for registered nurses is not based on a definition of the "need" as distinct from "demand" for nursing services. Need for health care has often been defined by normative ratios of health professionals to population (e.g., physician-population ratios used for determination of health manpower shortage areas) or by guidelines for the amount of services that should be provided to meet a specific standard of care (e.g., number of well child visits). Studies to date have not identified a standard or desired ratio of nurses to patients or nurses to population. Indeed, some experts suggest that it would be inappropriate to set standards for patient-nurse ratios at this time, given the number and complexity of factors that would have to be considered (e.g., patient acuity and case mix, involvement of other health care professionals, availability of technology). Nonetheless, evidence is mounting that the numbers and types of nurses providing care have serious implications for the quality of patient care. In the most

comprehensive study to date on the topic, Needleman and colleagues (2001) find that the size and mix of nurse staffing in United States hospitals has a direct impact on the health outcomes for patients. Strong and consistent relationships are shown between total nurse staffing and five patient outcomes (urinary track infections, pneumonia, length of stay, upper gastrointestinal bleeding, and shock). In addition, higher *registered* nurse staffing is associated with a 3 to 12 percent reduction in certain adverse outcomes.

There has been a push for more research and information on standards for an optimal supply and skill mix of nurses. In its 1996 report on nurse staffing in hospitals and nursing homes, the Institute of Medicine recommended a comprehensive study of the relationship between skill mix and quality of care. A national research agenda on the nation's health workforce was established within HRSA's Bureau of Health Professions. (Biviano, n.d.) In 1996, the Robert Wood Johnson Foundation initiated the Colleagues in Caring: Regional Collaboratives for Nursing Workforce Development program to foster the regional study of nursing workforce issues across the country. Twenty sites were funded, including Alaska, Arizona, Connecticut, Colorado, California, Washington, D.C., Hawaii, Minnesota, Maryland, northeast Missouri, the Kansas City, MO metropolitan area, Mississippi, New Jersey, New Mexico, Ohio, South Carolina, South Dakota, Tennessee, the coastal bend region of Texas, and the north central region of West Virginia. (Rapson and Rice, 1999)

Meanwhile, across the country, nurses and employers alike have declared a shortage of nurses based on their experiences in the health care setting (e.g., vacancy rates for nursing staff positions, difficulty recruiting and filling positions, high patient-nurse ratios). In Michigan, every focus group of nurses, nurse educators, and nursing leadership/administration identified the supply of nurses—first and most frequently—as the most important issue facing nursing in Michigan. Each group stated the issue from its particular perspective. Nurse educators identified the issue as a decline or shortage of students interested in enrolling in the nursing profession and a shortage of nursing faculty. Participants in the nursing leadership/administration group stated the issue as a "lack of supply of nurses" in the workforce. Staff nurses and supervisors stated the issue in terms of high ratios of patients to nurses in the work environment. The significance is that every one of these focus groups believed an inadequate supply of nurses to be the paramount issue facing nursing in Michigan.

## HOSPITAL DEMAND FOR NURSES IN MICHIGAN

High vacancy rates for nurse staff positions, rapid turnover of nurses, and difficulties in recruiting nurses to fill vacant positions are pointed to as signs of a shortage of nurses to meet hospital demand. But there is a lack of standards, such as expected or normal vacancy rates, for defining or measuring the extent of a shortage. The survey of all Michigan community hospitals, conducted during March and April 2001, requested information on use of nursing personnel within each hospital/health system.[7] In the absence of standards or trend data for nurse staffing, the survey findings presented below can only provide clues about the adequacy of the supply of nurses.

### *Survey Response Rate*

The findings are based on responses from 73 of the state's 146 community hospitals. Community hospitals do not include Veterans Administration hospitals or hospitals providing only psychiatric care. It is important to note that not all hospitals answered all questions, so the number of responses to individual questions varies. Percentages are averages for all hospitals surveyed unless otherwise noted. Va-

[7]A summary of key findings from the hospital nursing survey is available in Attachment B.

cancy rates could only be calculated for those hospitals that provided both the number of current full-time equivalents (FTEs) and the number of vacancies.

The hospitals whose representatives responded to the survey can be broken down as follows:

- 37 are from small hospitals (fewer than 100 beds), 19 are from medium-sized hospitals (100–299 beds), and 17 are from large hospitals (300 or more beds). Forty-six percent of the state's small community hospitals, 50 percent of the medium-sized community hospitals, and 63 percent of the large community hospitals answered the survey questions.
- 35 rural hospitals (59 percent of the state total) and 38 urban hospitals (44 percent of the state total) responded to the survey. Urban hospitals are defined as those located in a metropolitan statistical area (MSA); rural hospitals are not in an MSA.
- Due to inadequate numbers of responses received, breakdowns are possible for only three of the state's seven hospital regions: east central (EC, with 12 of 20 hospitals responding), Upper Peninsula (UP, with 13 of 15 hospitals responding), and west central (WC, with 14 of 25 hospitals). "Other" in the findings includes regions where less than half of the hospitals responded: southeast (19 of 46 hospitals), north central (5 of 13), mid-Michigan (2 of 10), and southwest (8 of 17). Refer to Exhibit 13 for a map of the hospital regions.

### *Average Vacancy Rates for All Hospitals*

- The overall vacancy rate for nurses—measured as vacancies divided by current full-time equivalents (FTEs)—in *direct* patient care is 8.2 percent.
- The overall vacancy rate for nurses—measured as vacancies divided by current FTEs—in *indirect* patient care is 3.3 percent.
- The overall vacancy rate for advanced practice nurses (APNs)—defined for the survey as nurse practitioners, nurse midwives, nurse anesthetists, first assistants, and clinical nurse specialists —is 8.1 percent.
- The overall vacancy rate for registered nurses is 7.8 percent.
- The overall vacancy rate for licensed practical nurses is 9.3 percent.
- The overall vacancy rate for unlicensed assistive personnel (UAPs) is 9.6 percent.

### *Difficulties with Recruitment and Retention*

- Hospital respondents say that—among direct care nurses—they have the most difficulty filling vacancies in critical care (54 percent reporting it is "extremely difficult" or "very difficult" to fill vacancies), followed by emergency/urgent care (42 percent), surgery (42 percent), and med-surg (30 percent).
- Hospital respondents say that—among education levels for nurses and UAPs—they have by far the most difficulty filling vacancies for RNs (51 percent say that it is "extremely difficult" or "very difficult" to fill vacancies), followed by LPNs (32 percent) and APNs (27 percent), with UAPs well behind.
- The overall turnover rate for hospital RNs was 13 percent in one year.
- There is no difference among hospitals by size in the length of time it takes to fill a direct care RN position—55 days on average.

## EXHIBIT 13
### Hospital Regions


**Regions by Number**

1 Southeast
2 Southwestern
3 West Central
4 Mid-Michigan
5 East Central
6 North Central
7 Upper Peninsula

### *Recruitment and Retention Strategies*

- The most popular benefits that hospitals use to attract and retain nurses are tuition reimbursement/scholarships (72 percent), supplemental pay for off-shift, specialty care, weekend or on call (70 percent), flexible hours (66 percent), employer provided/financed continuing education (59 percent), and referral bonuses (47 percent). Stress relief programs (12 percent), clinical/career ladder (13 percent), higher pay than other employers for overtime (13 percent), and on-site child care (16 percent) were offered the least.
- Thirty-nine percent of hospitals paid sign-on bonuses to nurses in the last fiscal year. The average amount of sign-on bonuses was $2,125, and varies little by size of hospital.
- Hospitals see salary/compensation, better benefits, flexible hours, and referral and sign-on bonuses as most effective in recruiting and retaining RNs.

### *Other Strategies for Meeting Staffing Needs*

- On average, temporary or traveling nurses cover 3 percent of nursing FTEs.
- More than three-quarters of hospitals do not recruit foreign-educated RNs. Eight percent do on a regular basis and 15 percent do occasionally.
- Canada is far and away the country from which most hospitals recruit foreign-educated RNs.

### *Differences Between Rural and Urban Hospitals*

Survey responses indicate that urban hospitals have higher vacancy rates than rural hospitals for nurses in direct patient care, indirect patient care, and for RNs, LPNs, and UAPs. Urban hospitals have a much more difficult time filling critical care vacancies than rural hospitals (63 percent to 43 percent reporting "extremely" or "very" difficult), APN vacancies (33 percent to 21 percent), and UAP vacancies (28 percent to 8 percent). Urban hospitals also need more time than rural hospitals to fill direct patient care positions (66 days on average compared to 41 days). Thirty-eight percent of urban hospitals and 10 percent of rural hospitals recruit foreign-educated nurses. In an apparent contrast to these responses, 38 percent of rural hospitals have increased their use of traveling and temporary nurses in the last six months, compared to 20 percent of urban hospitals.

### *Differences Among Hospitals by Size*

The survey responses suggest that, with few exceptions, large hospitals have higher nursing vacancy rates than medium-sized and small hospitals. The overall vacancy rates for nurses in direct patient care and nurses in indirect patient care are highest for large hospitals.

- The overall vacancy rate for registered nurses is higher in large hospitals (11.3 percent) than in medium (6.7 percent) and small (6.7 percent) hospitals. Vacancy rates are as high as 35 percent in large, 30 percent in medium-sized, and 22 percent in small hospitals. There is a statistically significant correlation between size and vacancy rate; in other words, as hospital size increases, so does the vacancy rate for RNs.
- The overall vacancy rate for licensed practical nurses is higher for large hospitals (19.3 percent) than for small (6.5 percent) and medium-sized (4.3 percent) hospitals.
- The overall vacancy rate for advanced practice nurses is higher for medium (12.2 percent) and large (8.8 percent) hospitals than for small (5.1 percent) hospitals.

### *Differences Among Hospitals by Region*

The survey shows that there are many regional variations in nursing vacancy rates and the time it takes to fill nursing vacancies.

- The overall vacancy rate for nurses in *direct* patient care is highest for west central (WC) (10.1) and Upper Peninsula (UP) (10.0), followed by Other (7.7) and east central (EC) (5.3). The overall vacancy rates for registered nurses and licensed practical nurses also are highest in WC. Not surprisingly, WC hospitals need longer to fill a *direct* care nursing vacancy, 83 days compared to 55 days for Other and 39 days for EC and UP. But WC hospitals also need the most time to fill an *indirect* care vacancy, 71 days, followed by 57 for Other, 52 for EC, and 29 for UP—even though the overall vacancy rate for nurses in *indirect* patient care is highest for EC (5.8).
- The overall vacancy rate for advanced practice nurses is higher for EC (12.0), followed by Other (9.5), UP (7.4), and WC (1.4).
- The overall vacancy rate for unlicensed assistive personnel is highest for UP (13.8), followed by Other (9.2), EC (8.6), and WC (7.9).

## DEMAND INFORMATION FROM OTHER STATES

According to a nationwide study released on January 3, 2001, by human resource consultants William M. Mercer, Inc., 32 percent of the 181 health care providers surveyed say turnover of registered nurses is a "significant" problem and 63 percent say it is "somewhat of a problem." Large health care organizations (those with $500 million or more in revenue) see the problem as most acute. Regionally, turnover is perceived to be more serious in the South and Midwest where 40 percent and 36 percent of the respondents, respectively, rate the turnover problem as significant. Health care employers also were asked to identify the primary causes of nurse turnover. For the second year in a row, the top response is "increased market demand" for nurses.

Dianne Anderson, president of the American Organization of Nurse Executives, told the Senate Health, Education, Labor, and Pensions Committee's Subcommittee on Aging that vacancy rates for registered nurses in hospitals range from 14 percent to 30 percent, and it takes six months to a year to fill each vacant position. Because of the nursing shortage, entire units have closed in her hospital outside Albany, New York. (BNA, 2001) Vacancy rates for RNs in hospitals in Maryland rose to 11 percent in calendar year 1999, three times higher than they were in the previous survey conducted in 1997. It took an average of 49.5 days to fill a RN vacancy, compared to 41.1 days in 1997, and the statewide turnover rate for RNs rose to 15.4 percent. (Association of Maryland Hospitals and Health Systems, 2000) In 1997, California reported a RN vacancy rate of 8.5 percent for all employers, with hospitals reporting a rate of 9.6 percent, nursing homes 6.9 percent, and home health care 6.4 percent. (Scanlon, 2001)California's shortage of nurses is termed a "public health crisis." (Keating and Sechrist, 2001)

## PROJECTIONS FOR GROWTH IN DEMAND FOR NURSES

The Bureau of Labor Statistics, U.S. Department of Labor, has identified the registered nurse as one of the ten occupations projected to have the largest numbers of new jobs in the near future. Licensed registered nurses already are the largest health care occupation in the United States, estimated at about 2.7 million as of March 2000. (HRSA, 2001) Employment of registered nurses is expected to grow faster than the average for all occupations through 2008. (Bureau of Labor Statistics, 2001) The Bureau of Labor Statistics predicts that "faster than average growth" will be driven by

- technological advances in patient care, which permit a greater number of medical problems to be treated,
- an increasing emphasis on primary care,
- increased numbers of older people who are more likely to need medical care, and
- job openings created by older, experienced nurses leaving the occupation.

The Bureau of Labor Statistics notes that employment in hospitals, currently the work setting employing the largest number of registered nurses, is expected to grow more slowly than employment in other settings. While more nurses per patient may be required in hospitals because of increased intensity of nursing care, the number of inpatients is not likely to increase much. More rapid growth is expected in hospitals' outpatient facilities, home health care, nursing homes, and physicians' offices and clinics. However, estimates of the projected growth in demand vary.

State of Michigan Occupational Employment Forecasts project a 9.2 percent increase in the number of registered nurse jobs between 1998 and 2008, compared to a 9.9 percent increase in all occupations combined. During this time period, the annual average number of job openings for registered nurses is expected to be 1,910, which includes 684 new growth openings and 1,226 openings per year for replacement of nurses leaving the profession. (Michigan Department of Career Development, 2001) Occupational Employment Forecasts are based on current business and industry trends. The projections may underestimate the number of replacement openings since 15,697 active, registered nurses in Michigan are already 55 years of age or older and most likely will retire in the next ten years.

In 1996, projections by HRSA's Bureau of Health Professionals estimated that Michigan requirements for full-time equivalent RNs would increase from 65,800 in 2000 to 70,000 in 2010. (HRSA, 2000) The inaccuracy of this projection is obvious now, since the estimated number of active full-time equivalent registered nurses (i.e., the number of full-time nurses plus half of part-time nurses) in Michigan in 1998–99 was already at 70,056.

Experts in the field have long recognized the difficulties of assessing, tracking and predicting the need and demand for nursing services. Most Colleagues in Caring sites spent Phase I (June 1996 to May 1999) creating collaboratives, collecting and analyzing supply and demand data, and establishing a means to determine demand. During Phase II (June 1999–May 2002), most sites are working on the development and testing of prediction models. (Rapson and Rice, 1999) Dr. Claude Earl Fox, HRSA administrator, has asserted that knowledge about local communities is key to effective health workforce forecasting. Policy experts and nursing professionals have called for the creation of state-level health workforce planning centers to build the capacity for valid and reliable state-level research and work force development. (Scanlon, 2001; Rapson and Rice, 1999)

# Factors Affecting Need and Demand for Nurses

Researchers and professional organizations have identified multiple interrelated factors affecting the demand for nursing services. Among these factors are: cost-containment pressures within health care organizations resulting from managed care and an increasingly competitive health care environment; hospital consolidation, downsizing and reengineering; reductions in inpatient hospitalization rates; increased acuity of hospital patients; and, a shift of outpatient care from hospitals to ambulatory and community-based settings. In addition, changing demographics—the aging of the population—and increasing life expectancy will increase demand for health care services. These factors and others affecting the demand and need for registered nursing services are often unpredictable and dependent on forces that are beyond the nursing profession's or employers' control.

## MANAGED CARE

In the early 1990s, health care futurists were predicting a reduction in the number of hospital beds due to managed care penetration. The nursing profession braced for downsizing as hospitals attempted to drive down costs. The slowdown in hospital employment that was first observed in states with high HMO enrollment in the early 1990s has emerged in all states now. The trends since 1994 in high-HMO states show little growth in hospital employment of RNs, but neither is there any evidence of the drastic employment reductions that were forecasted for the hospital sector. An important new trend since 1994 has been the slowdown in RN employment growth in the home health sector in states with high HMO enrollment, after an increase in home health employment in the early 1990s. It is possible that employment growth in home health may soon begin to slow nationwide. (Buerhaus, 1999)

Peterson blames implementation of managed care for almost a decade of constant health system change, reorganization, re-engineering, and changes in reimbursement and funding mechanisms resulting in deterioration of the overall work environment to such an extent that "many registered nurses have difficulty encouraging others to even enter the nursing profession." However, a recent study released by Aiken and colleagues indicates that nurse frustration is not unique to the United States health care system. Their findings document high levels of job dissatisfaction and burnout for nurses in Canada, England, and Scotland, as well as the United States. (Aiken et. al., 2001)

## REDUCTIONS IN INPATIENT RATES AND INCREASED ACUITY OF PATIENTS

In their review, Nevidjon and Erickson (2001) suggest that fundamental change in how patients are cared for in a managed care environment is compounding the shortage. Shorter length of hospital stays and more acute care in the ambulatory and home settings result in the need for experienced, highly skilled nurses. A recent GAO report by the United States General Accounting Office (GAO) notes that the higher proportion of patients with more complex care needs increases the demand for nurses with training in specialty areas such as critical care and emergency departments. The increased use of technology also has increased the demand for a higher skill mix of RNs. (Scanlon, 2001)

## CARE IN VARIED AND LESS RESTRICTIVE SETTINGS

The expansion of home health care and community-based health care delivery systems has increased the variety of job opportunities available. (Scanlon, 2001) The Bureau of Labor Statistics notes that technological advances, which will make it possible to bring increasingly complex treatments into home and community settings, will require nurses who are able to perform complex procedures in a variety of work settings. (Bureau of Labor Statistics, 2001)

## AGING OF THE GENERAL POPULATION

The demand for nurses will increase dramatically as the total population increases and the baby boom generation reaches age 65. The population aged 65 years and older will double from the year 2000 to 2030. The population aged 85 years and older—and in need of the most health care—is the fastest-growing age group in the United States. Depending on their age, 20 to 50 percent of the elderly are likely to need basic nursing care and assistance with daily living. (Scanlon, 2001)

## RATES OF DISABILITY, MORBIDITY, AND CHRONIC ILLNESS

As the population ages, the number of people with disabilities and chronic illnesses will increase, not necessarily because of higher rates of disease, but due to the shear numbers of elderly. According to the Health Care Financing Administration, 80 percent of the population 65 years of age and older have one or more chronic diseases, 50 percent have two or more, and 24 percent have problems so severe as to limit their ability to perform one or more activities of daily living. The health care needs of this population will increase demand on the nursing supply.

# Ensuring the Supply of Nurses Meets the Demand

The information collected in this study suggests that the current supply of nurses is not meeting the demand and need for nurses in Michigan—and the situation is going to get worse.

- Data from the MDCIS licensure surveys shows that growth in the nurse population is not keeping pace with the growth in Michigan's population—and this is occurring at a time when the proportion of nurses nearing retirement is increasing dramatically and the baby boomers will soon be needing more health care services.
- The number of graduates from nursing education programs is declining.
- The unemployment rate for licensed, active nurses in Michigan is only 2.5 percent, which leads to difficulty in recruiting qualified employees and results in pressure to increase wages.
- Michigan hospitals report extreme difficulties in filling vacancies and their vacancy rates and length of time it takes to fill positions are nearly as high as the vacancy rates in states with documented, severe shortages of nurses (e.g., California and Maryland).
- Every focus group of staff nurses, nurse educators and nursing leadership/administration identified the supply of nurses—both current and future—as the most important issue facing nursing in Michigan.

Strategies to ensure that the supply of nurses meets the demand for nursing service will have to address multiple factors affecting the supply immediately and over the long-term. Focus groups in Michigan said that the health care industry needs to "step up"—create partnerships between nursing schools and employers—and involve multiple stakeholders to find solutions. They suggested that there is a need to raise public awareness of the critical nature of the nursing shortage and the link to quality, access and outcomes of health care.

Nurse educators and nursing leadership/administration in Michigan also said that the supply and demand/need for nurses must be defined more precisely. The health care industry and nursing schools should be involved in the development and implementation of good data collection and analysis on an ongoing basis.

## ENCOURAGING MORE WOMEN, MEN AND MINORITIES TO ENTER NURSING

Focus groups of nurse educators said that, in the short-term, emphasis should be placed on improving the image of nursing, recruitment, scholarships and loan forgiveness, and compensation packages. In the long term, the focus should be on clarification of the role of nursing, redesign of the work setting, involvement of nurses in decision-making roles, improved interaction of nurses with colleagues in health care, and matching the design and size of the nursing workforce with population health care needs.

Focus groups suggested that a more positive image of nursing could be marketed by emphasizing the positive aspects of a nursing career, such as

- Variety of work opportunities within nursing

- Flexibility (i.e., a nurse can often adjust his or her schedule to meet family needs)
- Decent pay with opportunities to work anywhere in the country
- Satisfaction of helping people

Nursing leadership/administration, staff nurses and educators all offered specific suggestions for improving recruitment of nursing students:

- A coalition of nursing organizations could do more public relations targeting of counselors and schools, do more press releases on the nursing shortage, and try to overcome the negative image of nursing.
- High-school health academies should be established (similar to special-focus academies developed in Detroit and Lansing).
- Information should be provided in grades K–12 to make sure that students are aware of careers in health professions (e.g., career days in hospitals statewide, school-to-work programs with health care focus, shadow days).
- School counselors must be involved, beginning in middle school, to convey nursing as a positive career opportunity.
- An extensive workshop could be held at locations around the state to bring in employers and give students an opportunity to explore heath careers. (This would be an expansion of the two-week workshop on health careers being held this summer at Michigan State University with funding by the Michigan Department of Career Development.)

Nursing leadership/administration and educators identified a role for the health care industry in recruitment of students. Educators suggested that employers provide scholarships and guarantee the first year of work. Funding currently used by employers for sign-on bonuses could be shifted to scholarship activity, particularly since sign-on bonuses alienate long-term employees. Employers could provide part-time employment with benefits while nursing students attend school. Nursing leadership/administration noted that the health care industry also should support student recruitment efforts by providing more respect for nursing in the work place. Educators recommended employers give more visibility and credibility to advanced practice nursing roles in order to improve the image of nursing.

Nevidjon and Erickson (2001) describe some efforts underway in other parts of the country aimed at increasing the number of women and men entering nursing:

- *Collaborative efforts among health care organizations, government, nursing associations and nursing schools* In San Diego, six hospital systems have committed $1.3 million to support a program called, "Nurses Now," which will add faculty and additional student slots to San Diego University. The Dallas-Fort Worth Hospital Council raised $600,000 to expand student enrollment at local schools.
- *Special recruitment efforts to reach minority students and young men* In Boston, *Choose Nursing!* is a state, privately, and federally funded project designed to recruit public high school sophomores into a comprehensive two-year hospital program to foster and maintain their interest in nursing and prepare them to apply to collegiate nursing programs.
- *Utilization of current nursing students as recruiters* Cedar Crest College in Allentown, Pennsylvania offers a four credit course that requires students to make presentations in local schools, participate in elementary school clinics, update public libraries on nursing books, and create displays about nursing as a career.

## PREPARING NURSES FOR PRACTICE

Focus groups of staff nurses, nurse educators and nursing leadership/administration were in agreement on the need for additional on-the-job training for all nurses after they complete their schooling. Nursing leadership/administration said there is nothing much the nursing schools can do about this, as it has always been this way. They said some hospitals are re-instituting mentoring for new nurses. Educators and staff nurses said both internships and mentoring are needed, and the staff nurses pointed out that the mentors should be rewarded. Staff nurses praised internships where the student nurse's last semester is spent in a hospital in training. The bonus to the students, in addition to the valuable work experience, is that they are paid during their last semester of school. In exchange, the employer may require the student nurse to stay on two years as an employee at the hospital. Another option is the development of closer links between hospitals and nursing schools so that nursing students can get credit for working in a hospital. One example in Michigan is the combined classroom and clinical program provided for nursing students by Grand Valley State University and a Grand Rapids hospital during the summer. Nursing leadership/administration also mentioned that Sparrow Health System in Lansing has a nursing residency program with four months of training in the hospital at full pay, which attracts the most qualified incoming nurses.

The involvement of employers in providing internships may have a benefit for the employer as well. According to the Mercer survey, the most common and most highly rated tactic for recruiting nurses as employees involves intern/extern programs with nursing schools. (William M. Mercer, Inc., 2001)

Nursing leadership/administration and nurse educators pointed out that nursing programs need resources for advertising, recruitment, faculty development, and scholarships. Educators suggested a government subsidy to schools for nursing education. They also suggested support for development of on-line technology, which is necessary because of the high expense of purchasing programs for on-line clinical training. Resources for technology are needed as a way to bring continuing education and distance learning programs to rural areas and other smaller settings. Nurse educators also said the State Board of Nursing should provide nursing schools with a report of individual students' areas of strengths and weaknesses on the nursing licensing exam so the schools can strengthen curriculum as necessary.

## IMPROVING THE WORK ENVIRONMENT

While many factors come into play in improving the supply of nurses, the first step must be to make the workplace environment more attractive and conducive to nurses being able to practice. In the survey conducted by Peter D. Hart Research Associates (2001), three out of the four nurses who said they expect to leave the field in the next five years (for reasons other than retirement) would consider continuing in patient care longer if conditions at their job improved. Participants in all of the Michigan focus groups had a wealth of ideas for improving the practice setting, but they emphasized they meant "real work force environment improvements, not just sign-on bonuses and cookies during nurse's week." Jose Pagoaga, consultant with William M. Mercer, Inc., (2001) states that "While pay raises are often an excellent short-term solution, they frequently are insufficient as a long-term approach unless augmented by changes to the work environment. It's the total package of offerings that leads to the best attraction and retention [of nurses]."

Changing the workplace environment will require a collaborative effort involving all stakeholders—nurses, physicians, hospitals, payers. Focus group participants also suggested that nursing education programs should collaborate with the providers and employers to improve the practice setting.

Focus group participants offered several specific ideas for improving the work environment:

- Provide greater flexibility in scheduling
- Distribute responsibilities more equitably (i.e., nurses should not be responsible for so many aspects of service delivery)
- Reduce paperwork required of nurses
- Staff units according to acuity levels of patients, rather than numbers of patients
- Use interdisciplinary teams (e.g., for help in moving patients)
- Provide nurses more control of their work environment (e.g., participating on practice committees, participating with physicians on individual and aggregate patient care decisions)
- Utilize technology to reduce physical strain and improve communications
- Recognize and pay for different competency levels
- Guarantee work during periods of low patient census and utilize nurses for other support during those times (e.g., writing policies and protocols)
- Develop mechanisms for independent reimbursement for nursing services, rather than including them as part of the room charge

The theme of "valuing nurses" is repeated throughout current articles and recommendations on addressing the nursing shortage. "Nurses really want to be thought of and treated as, and have practice arrangements that validate that they really are providers, and not just part of the room rent. They need that acknowledgment," said Carolyn Williams, dean of the College of Nursing at the University of Kentucky, Lexington, and president of the American Association of Colleges of Nursing. (BNA, 2001) Professionals suggest that past economic solutions such as sign-on bonuses, relocation coverage, or new premium packages will have limited and temporary effect because they simply redistribute the supply of nurses, but do not increase it—and the shortage of nurses now and in the future is not a result of maldistribution. (Nevidjon and Erickson, 2001)

Experts suggest that one of the challenges for the work environment is "redesign of patient care delivery models that are built to support the practice of an older workforce. Nursing, a physically demanding profession, must address this challenge by initializing new technology into practice. Hospitals must support the aging nurse by offering flexibility in scheduling, increased time off, and sabbaticals." (Nevidjon and Erickson, 2001) They also point out that numerous studies on delivery models and restructuring demonstrate that different staff mixes and approaches work in different settings. There isn't a one size fits all" model. What must remain constant is the guarantee that every patient has a nurse.

Buerhaus and colleagues (2000) also recommend that efforts to restructure patient care delivery must be more ergonomically sensitive to older RNs, who are more susceptible to neck, back, and foot injuries and have a reduced capacity to perform certain physical tasks, compared with younger RNs who once dominated the workforce. Buerhaus also suggests that older and more experienced RNs may have higher expectations of working conditions and require greater autonomy and respect than has typically been afforded to nurses.

Nevidjon and Erickson (2001) say that healthcare executives, including nursing leaders, must learn new skills for valuing employees—seeing them as an asset on the balance sheet instead of an expense. They suggest that administrators and educators must learn what the "satisfiers" are for staff, and when roles are redefined, they must help staff identify new sources of satisfaction. They cite a recent study by

McNeese-Smith reporting that nurses found satisfaction from direct care, yet their role was changing to be the organizer and coordinator of care. They also found that nurses who provide poor care, have a negative attitude, or are burned-out create dissatisfaction for their co-workers. Nevidjon and Erickson recommend involving nurses in defining and developing the practice of care in the organization, since they are the closest to the patient.

## MONITORING THE SUPPLY AND DEMAND

The capacity for tracking the supply and demand for nursing services is limited at the national level. Experts have called for the establishment of workforce data collection centers at the state level—many states only collect data every 4 years and may know the number of licensed nurses but not the number actually practicing. Michigan has an established data collection system on the supply of nurses (MDCIS Licensure Survey), but data are very limited on nursing education (students and faculty) and the demand for nurses in the workforce. Therefore, the capacity to project supply and demand is non-existent.

# Recommendations For Further Study and Action

Nursing professionals and other health care experts have recommended multi-pronged, collaborative approaches to address the current and long-term shortage of nurses in the national labor force. For example, the American Organization of Nurse Executives (AONE) published *Perspectives on the Nursing Shortage: A Blueprint for Action* in October 2000. The recommendations it contains are founded on the premise that all parties involved in the delivery of nursing services must collaborate in the development and implementation of strategies to improve the quality and efficiency of health care delivery in order to successfully address the nursing shortage. (American Organization of Nurse Executives, 2000) A panel on *The Future of the Health Care Labor Force in a Graying Society* recently released its report with wide-ranging recommendations including partnerships between the public and private sector. (University of Illinois at Chicago, 2001)

*The following recommendations for Michigan are offered as a starting point for discussion among stakeholders on the many issues surrounding the needs of the professional nursing workforce. It is clear that the issues cannot be addressed by nurses alone—health care employers, regulators, legislators, health care payers, educators and nurses will need to work together to assure the optimum quantity and quality of the professional nursing workforce in Michigan.*

## CREATION OF A MICHIGAN HEALTH WORKFORCE PLANNING CENTER

Policy experts and nursing professionals have called for the creation of state-level health workforce planning centers to build the capacity for valid and reliable state-level research and work force development. The efforts underway to develop collaboratives through the Robert Wood Johnson Foundation *Colleagues in Caring* program can serve as models. Michigan has good data, available periodically on the licensed nurse population, and a funding source (nursing licensure fees) for research. Reliable data on the demand and use of nurses—based on hospital/health system, nursing home, physician office, and other employer assessments—is needed in order to develop forecasts. Collection and analysis of data on preparedness of nursing graduates is needed to refine curriculum and training opportunities. Michigan stakeholders should establish an ongoing collaborative, partnership body among nurses and nursing organizations, educators, employers of nurses, health care payers, legislators and regulatory bodies to:

- Work on specific recommendations for improving data collection, coordination and dissemination of information on workforce trends at the facility, regional and state level;
- Develop/implement a forecasting model for the supply, demand and need for nurses;
- Create a feedback/communication loop between educators, employers, and regulators; and
- Monitor and implement responses to the changing demand and supply of nursing services.

## EXPANSION OF PARTNERSHIPS BETWEEN NURSING SCHOOLS AND EMPLOYERS

The work environment and recruitment and education of nursing students are intertwined factors affecting the supply of nurses. Several Michigan nursing programs and employers in the health care system have created partnerships for recruitment of nurses and improvements in the work environ-

ment. These partnerships could be expanded to create a collaborative, statewide approach. Some of the following suggestions have been made by the American Organization of Nurse Executives (AONE, 2000) and could be adapted for implementation in Michigan. Through expanded partnerships, nursing programs and employers should

- Identify and cultivate work environments that improve work-life quality for all nurses and support the changing demands of an older workforce;
- Facilitate supervised exposure to clinical experiences as part of the nursing curriculum and/or as an internship program for new graduates;
- Provide additional training for new graduates to prepare them to supervise other health care providers;
- Provide nurses with incentives and access to post-graduate degree-granting education to retain maturing staff and ensure an adequate pool of nurses to move into education, management and advanced practice roles;
- Support recruitment efforts to attract future generations to the profession of nursing and enhance the diversity of the nursing workforce;
- Advocate for increased state and federal support of nursing education programs and tuition assistance for students;
- Identify and advocate for implementation of technology to improve the work environment and increase access to education;
- Highlight "best practices" in nursing education and employer-based training opportunities; and
- Develop statewide and local public image campaigns to attract more people to nursing.

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# Attachment A

# Study of Current and Future Needs of the Professional Nursing Workforce in Michigan

## *Summary of Focus Group Discussions*

## METHODOLOGY

Five* focus group discussions were conducted with nurses involved in direct patient care, nursing leadership/administration, and nurse educators. The participants in the focus groups included members of the Michigan Department of Consumer and Industry Services (MDCIS) Nursing Workforce Steering Committee and other individuals recruited from Michigan hospitals and post-secondary nursing programs. MDCIS recruited participants for the focus groups and handled all logistics for each of the focus groups (e.g., room reservations and setup, registration, and refreshments). Pubic Sector Consultants, Inc. (PSC) worked with MDCIS to design the questions for the focus groups. PSC consultants facilitated each of the focus groups and prepared this summary of findings.

Invitations to participate in the focus groups were mailed to 101 individuals representing 46 hospitals, 32 college and university nursing programs, and ten professional organizations. A total of 53 people participated in the focus group discussions.

Two of the focus groups consisted of professionals involved in nursing education. Ten people representing master's programs in nursing (MSN) or baccalaureate programs (BSN) participated in one session. Fifteen people representing programs for licensed practical nursing (LPN) or associate degree programs (ADN) participated in the other session for educators.

Two of the remaining focus groups were made up predominantly of staff nurses and front-line supervisors from hospitals. Fifteen people, representing seven hospitals and two state level professional organizations, participated in a session scheduled for staff from southeast Michigan hospitals. Six people, representing two hospitals, participated in the session scheduled for urban hospitals outside of southeast Michigan. Another session scheduled for rural hospitals was cancelled due to low registration.

Seven people, including five hospital directors of nursing, participated in the fifth focus group for individuals involved in nursing leadership/administration.

Each participant was asked to identify what she or he believes to be the three most important issues facing nursing in Michigan. (Nurse educators were asked instead to identify the three most important issues facing nursing *education* in Michigan.) Then each group was asked how these issues should be addressed, followed by a series of questions on recruitment of women and men into the nursing profession, preparation of nurses for practice, and support for nurses in the practice setting.

## MOST IMPORTANT ISSUES FACING NURSING IN MICHIGAN

### *Supply of Nurses*

Participants in every focus group identified the supply of nurses—first and most frequently—as the most important issue facing nursing in Michigan. However, each group stated the issue from its particular perspective. Nurse educators identified the issue as a decline or shortage of students interested in enrolling in the nursing profession and a shortage of nursing faculty. Participants in the nursing leader-

*One of the six scheduled focus groups was cancelled due to low registration.

ship/administration group stated the issue as a "lack of supply of nurses" in the workforce. Staff nurses and supervisors stated the issue in terms of high ratios of patients to nurses in the work environment. Most significant is the fact that every one of these focus groups believed an inadequate supply of nurses to be the paramount issue facing nursing in Michigan.

All of the focus groups mentioned the aging or "graying" of the nursing population as well. Nurses in the field pointed out that the workforce is aging. They warned that, with more nurses nearing retirement than there are nurses entering the profession, "a calamity awaits." Nurse educators noted that nursing faculty also are aging and the pool of qualified candidates for faculty positions is decreasing. They reported that there are fewer master's-prepared nurses available or seeking faculty positions and fewer baccalaureate-prepared nurses available for clinical instructor positions—although one director of a nursing program said she had found plenty of faculty candidates for baccalaureate programs who were "fleeing" the direct patient care work environment.

### *Image of Nursing*

Nurse educators, nursing leadership/administration, and nurses involved in direct care all attribute the decline in the number of students interested in nursing to the increase in more attractive, competing career options for women and a negative image of nursing as a career. They said nursing is not considered a career of choice for the best and the brightest students, but rather a "voc-tech career." As stated by one participant, "The career itself—the workload—is turning away students." The pay and the benefits for nursing do not attract people into the profession, particularly when other professions have less responsibility and higher pay. Nursing leadership/administration and educators said that nurses even "badmouth" their own profession. The best features of the profession are not marketed. The seriousness of the image problem was dramatized when one participant asked the staff nurses and first line supervisors in one of the focus groups to raise their hand if they would encourage their daughters to go into nursing—and not one nurse raised her hand.

Some nurse educators and staff nurses suggested that the multiple levels of nursing education programs and degrees results in confusion and less respect from the public and physicians for nursing as a profession. Some participants also suggested that media images of nursing, such as popular hospital-based television shows, do not accurately portray what nurses do or the level of commitment involved.

### *Work Environment*

All five focus groups identified a poor work environment as a major issue, which in turn leads to the poor image of nursing as a career. Some of the nurses acknowledged that financial demands on hospitals drive staffing decisions that result in high patient/nurse ratios. But they pointed out that while there are fewer nurses to do the work, there is more work to do. A few focus group participants said the quality of care is definitely compromised by the current shortage and they cited recent studies on the relationship of patient-nurse ratios to quality of care. The following comments reflect the discussion in the focus groups regarding the work environment for nurses:

- The work environment is chaotic and nurses get too little support from other health professionals and personnel.
- Long shifts, often with mandatory overtime, are a big problem.
- Paperwork is horrendous and time consuming. Nurses have to give up some patient care to cover their responsibilities for paperwork, but they are very reluctant to do so.

- The demands of an aging patient population are greater (i.e., increased acuity*).
- Patients have shorter length of stays in the hospital, but they are generally sicker—and heavier, too.
- Nurses are forced to be a "jack of all trades," including taking on non-nursing tasks.
- Nurses become task oriented, with less time for teaching and critical thinking that defines nursing.
- A highly regulated workplace limits flexibility in patient care.
- The difficult work environment drives nurses from the bedside and even out of nursing altogether.

Focus group participants said the poor work environment is compounded by a lack of value placed on nurses within the health care system.

- The pay scale and benefits provided to nurses are not commensurate with the difficulty of work, commitment required, level of responsibility, and liability.
- Reimbursement on an hourly basis rather than salary is demeaning for nurses as professionals.
- There is no differentiation in compensation for different degree preparation, although some participants said this varies by hospital.
- Retirement benefit packages are notoriously low. Some participants knew of nurses who had left the profession for other employment so they would be eligible for health insurance as part of a retirement package.
- Nurses are expected to cover additional patient loads when staff is short for a shift, but they are sent home without pay when the patient census is low.
- There is no mentoring or support for newly hired nurses. New graduates often supervise other new graduates or are put on shifts that have fewer support staff available. One nurse commented that "newly hired workers in the automobile industry receive more on-the-job training and supervision than newly hired nurses."
- There is an absence of career ladders. Advanced practice nurses work to get extra training and then are undervalued in the hospital, so they leave.
- There is no focus on nurses' personal health and well-being.
- Nurses are not included in administrative decision making.
- Unlike other health professional services, nursing services are not billed independently—only treated as "part of the room rent."

### *Recruitment and Retention*

Each of the focus groups mentioned recruitment and/or retention of nurses as an important issue facing nursing. They devoted more discussion to the supply of nurses and aging of the nursing workforce, the image of nursing, and the work environment, but all of these issues are interrelated with difficulties of recruitment and retention. Nurse educators said they are having particular difficulty recruiting diverse students, namely men and minority populations. Nursing executives and staff nurses indicated there are problems recruiting nurses to work in particular geographic areas, such as rural areas and smaller urban areas. Participants from three rural hospitals said that their hospitals are almost exclusively de-

*The term acuity is being used within the profession to mean the intensity of care required to address patients' acute health care needs.

pendent on nurses who live in the community; few nurses are recruited to a rural hospital from another area. Nurse educators pointed out that in the face of current and future nursing shortages, it is also important to improve retention of the current workforce and consider retraining older, experienced nurses for new roles.

### *Influence of the Health Care System*

In one focus group, staff nurses cited the implementation of managed care and its impact on access to care as a major issue for nursing. They said that as a result of managed care, patients are using hospital departments in nontraditional ways (e.g., use of the emergency room for primary care). Patients are "moved through" the hospital faster. Shorter length of stays for patients means less time for effective patient education. Nurses have to readjust scheduling to meet managed-care requirements related to specific diagnoses and treatments. The nurse's job becomes even more difficult if ancillary departments do not follow through. If requirements are not met, the nurses feel that they are the ones who have to "answer to the state."

In three of the focus groups, including both groups of nurse educators, participants stated that the issues affecting nursing are part of larger issues affecting the health care system as a whole. As one participant said, "The health care system is broken and uncoordinated." The health care system has developed a reputation as unstable and people may be hesitant to enter the field. Workers experience a lack of control over staffing and other factors affecting their work environment. Participants said the health care workforce needs restructuring. The nurses recognize that there are shortages in other areas, too, such as pharmacy and lab technology, but suggested nursing shortages may be most apparent because nurses deliver direct patient care that cannot be deferred.

### *Preparation of Nurses*

Two of the focus groups mentioned the need for better preparation of nurses as a major issue even before they were asked directly about the adequacy of preparation for nurses. Specifically, they said that new nurses entering the workforce are not well prepared for the demands of the workload and acuity level of patients. When participants in the other three focus groups were asked if nurses are well prepared, they were consistent in their call for more support on the job for new nurses and more experience as a nurse before moving into a specialty area. The nurse educators and some staff nurses believe that nursing students overall *are* well prepared for general medical/surgical care. But many participants suggested that even good nursing students aren't ready for acute care hospital work. As one nurse said, "No matter what program they graduate from, they still need time to learn." They need to receive mentoring or internships to assist with the transition to work and should not be expected to "hit the ground running." Some focus group participants noted that both nursing students and employers have unrealistic expectations that nurses will be ready to move into management positions or specialty areas immediately after obtaining a degree.

Nurse educators made a few comments comparing the preparation of associate's degree nursing students (ADN) and baccalaureate degree nursing students (BSN). They noted that graduates of BSN programs usually have more critical analysis skills, while all new graduates are well prepared for med-surg (medical/surgical) nursing or long-term care but not for specialty areas. They questioned whether it is appropriate to expect ADN program graduates to perform in the same capacity as a BSN program graduate.

### *Caliber of Incoming Nursing Students*

Comments by staff nurses focused on the preparedness of nursing graduates for the practice setting, saying that fewer are passing the board exams or that new nurses lack critical thinking skills, basic

knowledge, and/or interpersonal skills. However, nurse educators took this concern to another level and expressed serious concern about the caliber of *incoming* nursing students. While nursing program directors made it clear they have not lowered standards for admission, they said the decline in applicants for nursing programs has resulted in acceptance of applicants that are not as well qualified. Whereas successful applicants in the past surpassed minimum entrance requirements and usually had at least a 3.5 high school grade point average, some programs are now enrolling applicants with a 2.5 grade point average. These incoming nursing students lack the strong reading, math, and writing skills that are necessary for success in a nursing program. As one educator commented, today's nursing students "are watchers, not readers." Because the incoming students are not as strong, more faculty time is necessary to assist students. Some educators said they have gone so far as to implement special tutoring programs for nursing students with lower reading comprehension skills.

Many nursing students today come from lower socioeconomic backgrounds and need more financial and family support. They often are working in order to support a family and pay for childcare while they are paying for nursing education classes and supplies. Class schedules are not convenient for these nontraditional students.

### *Support for Nursing Education*

Nurse educators identified the need for more financial support for nursing education programs. They explained that nursing education programs are expensive to offer because of the requirements for laboratory and clinical study. In addition, nursing programs are faced with the challenge of providing alternative education formats, such as on-line learning technology for nontraditional students. Nursing programs cannot expand to meet the need for more nurses without money for advertising, recruitment, faculty development, clinical placement opportunities, and scholarships. Currently nurse educators say there is a shortage of clinical placement sites for nursing students, particularly in rural areas and in specialty areas such as pediatrics and psychology. The shortage of clinical placement sites is directly related to the shortage of staff nurses because nursing programs must consider the staffing of a potential clinical placement site and its effect on the quality of the placement. Placements in the current poor work environment create more burdens for the faculty in terms of supporting the students. Some nurse educators warned that educational institutions offering nursing programs are not particularly interested in expanding the programs to serve more students when the cost of the programs is so high.

Financial support for students is also needed. Completion of a nursing program is demanding, similar to completion of a medical degree, and students need financial support in order to be able to devote the necessary time and effort to their education. Nurse educators said that there is no source of financial support for BSN-prepared nurses who are trying to complete a master's program in nursing.

In addition to financial support for nursing education, nurse educators said they need more and better information on the supply and demand for nurses, and feedback from testing results (i.e., NCLEX*) and employers on the quality of nursing graduates. They said they cannot do quality assurance and outcomes based curriculum revision without information on the results of the current curriculum. They cannot prepare an adequate supply of nurses when there is no data available on current or projected demand. One administrator suggested that there seems to be "a disconnect" between nursing, higher education and employer needs.

*National Council Licensure Examination.

## GENERAL STRATEGIES FOR ADDRESSING MAJOR ISSUES

Nurse educators said that addressing the issues facing nursing will require short-term and long-term strategies. In the short-term, they suggested the emphasis should be on the image of nursing, recruitment, scholarships and loan forgiveness, and compensation packages. In the long-term, the focus should be on clarification of the role of nursing, redesign of the work setting, involvement of nurses in decision-making roles, improved interaction of nurses with colleagues in health care, and matching the design and size of the nursing workforce with population health care needs.

Nursing leadership/administration said that the health care industry needs "to step up" and create partnerships between schools and employers to find solutions. Nurse educators went further and pointed out that the supply of nurses is a problem that affects everyone in Michigan and it needs to be addressed by multiple stakeholders (e.g., legislators, educators, consumers, employers and payers, business and industry). They suggested a need to raise public awareness of the critical nature of the nursing shortage and create a realization of the problem at the national level. They also suggested the need to link the shortage to the quality, outcomes and access of health care.

Nursing leadership/administration suggested that more could be done to identify and publicize best practices in nursing education, recruitment, and retention—perhaps by seeking funding for a website. Grants could be offered for innovations in nursing. Another suggestion was to hold a statewide symposium on nursing and invite all stakeholders.

But nursing leadership/administration also said the first remedy is funding—funding for health care services in general, funding for workplace improvements, funding for technology to provide nurses with the tools to do their jobs, and funding for education. The health care system needs to be redesigned and financed through mechanisms that will reduce the uncertainty of employment.

Some staff nurses, educators, and nursing leadership/administration suggested that nurses have power to influence the health care system if they work together. As the largest and most visible group in the health care workforce, nurses could use their clout to influence legislative issues such as payment for providers, regulatory constraints, and licensure requirements.

Nurse educators and nursing leadership/administration both said that the supply and demand for nurses must be defined more precisely. The industry and schools should be involved in the development and implementation of good data collection and analysis on an ongoing basis. Nurse educators pointed out that the "right size" nursing work force depends on the health status of the population and appropriate utilization of nurses at different levels of preparation. They said currently there is no way to predict nursing supply needs. They cautioned that data on supply and demand has to differentiate between rural and urban, part-time and full-time, and different practice settings.

Both nursing leadership/administration and staff nurses were skeptical about the government's role in addressing the nursing shortage. Nursing leadership/administration said government often hurts nursing by trying to help (e.g., excessive regulation, mandatory staffing ratios that lower the bar, bringing in Canadian nurses as a short-term fix). Current regulatory requirements (e.g., HCFA, JCAHO*) pull nurses away from delivery of patient care. Staff nurses said inspections should be streamlined. Staff nurses pointed out that the government must recognize that budget cuts affect nursing quality directly – resulting in lower pay, and less time for education and mentoring.

*Health Care Financing Administration, Joint Commission on Accreditation of Health Care Organizations.

One staff nurse said, "It would be good if government stayed out of it," when the group was asked what state government could do to encourage men and women to enter nursing. Nurse educators said there is a need to create communication links with government as a constant mechanism for sharing ideas for improvement. They stressed that doctoral degree nurses need to be involved in identifying and implementing improvements.

## ENCOURAGING MORE MEN AND WOMEN TO ENTER NURSING

Staff nurses, nursing leadership/administration, and educators said a more positive image of nursing could be marketed by emphasizing that

- there are a variety of work opportunities within nursing;
- nursing can be flexible and accommodating—a nurse can often adjust his or her schedule to meet family needs;
- a nursing position is a decent paying job and you can work anywhere in the country; and
- nurses have the satisfaction of helping people whose lives are in their hands.

Nursing leadership/administration, staff nurses, and educators all offered specific suggestions for improving recruitment of nursing students:

- A coalition of nursing organizations could do more public relations targeting counselors and schools, do more press releases on the nursing shortage, and try to overcome the negative image of nursing.
- High-school health academies should be established (similar to special-focus academies developed in Detroit and Lansing).
- Information should be provided in grades K-12 to make sure that students are aware of careers in health professions (e.g., career days in hospitals statewide, school-to-work programs with health care focus, shadow days).
- School counselors must be involved, beginning in middle school, to portray nursing as a positive career opportunity.
- An extensive workshop could be held at locations around the state to bring in employers and give students an opportunity to explore heath careers. (This would be an expansion of the two-week workshop on health careers being held this summer at Michigan State University with funding by the Michigan Department of Career Development.)

Nursing leadership/administration suggested that mentoring is essential, especially for nontraditional students. They said young people want to make a difference in life and do something meaningful. Mentoring can show them that a career in nursing fulfills those requirements. Staff nurses suggested that recruiting more males would elevate the profession in society's eyes. They also suggested targeting older students (25 years of age or older) since they tend to have a better work ethic, are more accountable and more caring, and their salary expectations are more realistic.

Staff nurses, nursing leadership/administration, and educators all identified a role for the health care industry in recruitment of students. Educators suggested that employers provide scholarships and guarantee the first year of work. Funding currently used by employers for sign-on bonuses could be shifted to scholarship activity, particularly since sign-on bonuses alienate long-term employees. Employers could provide part-time employment with benefits while nursing students attend school. Nursing leadership/administration noted that the health care industry also should support student recruitment efforts by providing more respect for nursing in the workplace. Educators recommended employers give more

visibility and credibility to advanced-practice nursing roles in order to improve the image of nursing. To improve retention of the current workforce, staff nurses said better benefits should be provided (e.g., health insurance, retirement).

The government role in improving recruitment and retention could include:

- Providing incentives for partnerships between employers and schools of nursing (e.g., sharing faculty, implementing a clinical practicum in the hospital)
- Offering scholarship/tuition grants for young students and students entering nursing as a second career
- Providing child care stipends and/or tax breaks for nursing students returning to school
- Offering government loan "payback" programs for students who work in shortage areas
- Funding hospitals to hire people to work in schools to tell students about careers in nursing
- Establishing more autonomy and reimbursement for advanced practice nurses
- Allowing the nursing profession to regulate nursing (Nursing leadership/administration said that currently the Board of Nursing has little power and is, in reality, staff-driven and political.)
- Providing funding support for nursing education similar to the subsidies provided for medical education

## PREPARATION FOR THE PRACTICE SETTING

All of the focus groups were in agreement on the need for additional on-the-job training for all nurses after they complete their schooling. Nursing leadership/administration said that it has always been this way and there is nothing much the nursing schools can do about it. They said some hospitals are re-instituting mentoring for new nurses. Educators and staff nurses said both internships and mentoring are needed, and the staff nurses said that the mentors should be rewarded. Staff nurses praised internships where the last semester in school is spent in a hospital in training. The bonus to the students, in addition to the valuable work experience, is that they are paid during their last semester of school. In exchange, they are required to stay on two years as an employee at the hospital. Another option is the development of closer links between hospitals and nursing schools so that nursing students can get credit for working in a hospital. One example is a combined classroom and clinical program provided during the summer for nursing students by Grand Valley State University and a Grand Rapids hospital. Nursing leadership/administration mentioned that Sparrow Health System in Lansing has a nursing residency program with four months of training in the hospital at full pay, which attracts the most qualified incoming nurses.

Staff nurses raised the issue and were divided on whether or not to make a BSN the entry-level degree required for nursing. Some said this could worsen the shortage, but others said it would mean greater professionalism. Educators also raised the issue but were divided. They said it may be shortsighted to try to get nurses quickly through ADN programs when BS-prepared nurses are needed, but they also said AD-prepared nurses can be part of the solution. Educators did agree that more research is needed on outcomes/quality associated with nurse preparation for all practice settings. In particular, more study is needed to identify how BSN and graduate level nurses should work with nurses prepared at a lower level. They reported that some demonstration models have been developed in primary care centers in Michigan to explore this issue.

Nursing programs need resources for advertising, recruitment, faculty development, and scholarships. Educators suggested a government subsidy to schools for nursing education. They also sug-

gested support for development of on-line technology, which is necessary because of the high expense of purchasing programs for on-line clinical training. Resources for technology are needed as a way to bring continuing education and distance learning programs to rural areas and other smaller settings.

The State Board of Nursing should provide nursing schools with a report of individual students' areas of strengths and weaknesses on the licensing exam so the schools can strengthen curriculum as necessary. Funding is needed in order to provide the data and analyses to the schools.

## SUPPORTING NURSES IN THE PRACTICE SETTING

Participants in all of the focus groups had a wealth of ideas for supporting nurses in the practice setting, but they emphasized they meant "real workforce environment improvements, not just sign-on bonuses and cookies during nurses' week." Educators suggested that physicians and residents are feeling overwhelmed themselves and this may be an opportune time to engage them in making improvements for nurses because of the benefit for the whole health care team. They also suggested that nursing education programs should collaborate with the practice setting to improve employment opportunities.

Staff nurses, executives and nurse educators all emphasized the need for greater flexibility in scheduling. They said that most employers do this now, with options to work 8-, 10-, or 12-hour shifts. Some offer self-scheduling, within limits. Some educators cautioned that flexible scheduling could be bad from the patient's perspective because it may result in lack of continuity or investment in care of patient. Staff nurses suggested offering some scheduling with no weekend shifts. Educators suggested shorter shifts and questioned whether 12-hour shifts are good for the quality of patient care. At the other extreme, staff nurses suggested that short shifts (e.g., 4 hours) disrupt the continuity of patient care.

Staff nurses offered the following suggestions related to the nurses' workload:

- Nurses shouldn't be responsible for so many aspects of service delivery.
- Paperwork required of nurses should be reduced.
- Units should be staffed according to acuity, not number of patients.
- Interdisciplinary teams could help in moving patients.

Educators stressed that it is important to provide nurses control of their work environment—working cooperatively with other providers, participating on practice committees, setting up their own practice protocols, meeting with drug representatives, participating with physicians on individual and aggregate patient care decisions, participating in administrative decisions such as hiring of CEOs. They said investments need to be made in technology to reduce physical strain and improve communications (e.g., use of computer technology for decision making and aggregate data).

Participants in the nursing leadership/administration group noted that the LPN appears to be "a dying breed." But they said that RNs need to have support from licensed practical nurses or someone with training similar to that of an LPN. With this assistance, the RN does assessment and decision making, the LPN does routine technical work (e.g., blood draws, blood pressure readings), and unlicensed assistive personnel (UAP) do nonclinical tasks (walk patients, change beds, etc.). But in discussions with staff nurses, they said that because LPNs are restricted in their scope of practice, the use of an LPN is not very helpful because the RN still has to support the LPN. Some educators and staff nurses said nurse's aides and technical support staff should be trained to do more, noting that the "good ones" are helpful.

However, both focus groups of staff nurses said they were concerned about the qualifications of less well-trained health care workers, including LPNs and nurse aides. They said this varies from hospital to hospital. Some staff nurses said LPNs are probably doing more than they should and the RN is signing for it. Other staff nurses commented that some LPNs feel they have been trained, often on the job, well enough to be delegated certain tasks (for example, LPNs review medication sheets daily in some hospitals).

Nursing leadership/administration, staff nurses, and educators said employers need to recognize and pay for different competencies and provide a tiered pay structure depending on the nurse's degree and scope of work (including work on committees, in teaching, in the community, in research). Staff nurses said that employers need to provide more opportunities for advancement. Educators said that employers should improve pensions and retirement packages to maintain and retain the current workforce. They also said that work should be guaranteed during low patient census, using nurses in down times for other support (e.g., writing policies and protocols).

Staff nurses said that nurses should be paid on a salary rather than an hourly wage to improve the image of nursing. They also said that more avenues should be developed for independent reimbursement of nurses. They suggested that perhaps a nursing charge would educate patients on value of nursing, rather than including nursing care as part of the room charge.

# Attachment B

## Nursing Needs Assessment Survey for Hospitals/Health Systems

This questionnaire is designed to obtain information on current professional nursing needs in hospitals and health systems in Michigan. The focus is primarily on Registered Nurses in direct patient care, but some of the questions ask about other types of nursing personnel. Your responses will be kept confidential and reported only in statewide or regional tabulations and summaries. If response categories do not adequately reflect your situation or ideas, feel free to add comments at the end of the questionnaire in the space provided.

**SECTION A: Organization and Contact Information**

1. Name of your hospital/health system: _____
2. Your name: _____
3. Title: _____
4. Telephone number: _____

**SECTION B: Nursing Personnel**

Please answer the following questions based on the total number of nurses employed by your facility (i.e., hospital/health system). Nurses employed by your facility may include nurses in physician practices, outpatient care, long term care, and home health as well as inpatient care.

Current full-time equivalents (FTEs) are the number of full-time equivalent positions currently filled for your facility. Vacancies are the number of open, posted full-time equivalent positions that your facility is actively trying to fill now. A full-time equivalent position equals 2,080 hours or more per year. Count a half-time position as .5 FTE and a quarter-time position as .25 FTE.

5. Indicate the number of nurses involved in *direct patient care* according to their highest level of nursing education.

| Level of education | Current FTEs | Vacancies | Vacancy Rate |
|---|---|---|---|
| Advanced Practice Nurses | 15.16 | 2.07 | 8.12 |
| Registered Nurses | 256.89 | 22.38 | 7.77 |
| Licensed Practical Nurses | 29.12 | 3.23 | 9.31 |
| Unlicensed Assistive Personnel | 87.35 | 9.14 | 9.61 |

*Advanced Practice Nurses include nurse practitioners, nurse midwives, nurse anesthetists, first assistants and clinical nurse specialists.*

6. Indicate the number of nurses involved in *direct* patient care and *indirect* patient care.

| Type of Nursing Staff | Current FTEs | Vacancies | Vacancy Rate |
|---|---|---|---|
| Direct patient care | 245.47 | 19.34 | 8.22 |
| Indirect patient care | 31.07 | 1.42 | 3.34 |

*Indirect patient care includes management (administrators, supervisors, managers, quality assurance staff and discharge planners) and education (telephone advice nurse, inservice educator, patient educator, infection control practitioner).*

**SECTION C: Recruitment and Retention**

7. Indicate the degree of difficulty you have in filling vacancies in the following areas. Indicate not applicable (NA) for any areas that are not included in your facility.

| | Extremely Difficult | Very Difficult | Somewhat Difficult | Not at all Difficult | Not Applicable |
|---|---|---|---|---|---|
| ***Direct Care Staff*** | | | | | |
| a. Med-Surg Nurse | 11 | 19 | 51 | 12 | 7 |
| b. Surgery | 15 | 27 | 30 | 12 | 15 |
| c. Critical Care | 16 | 38 | 23 | 3 | 21 |
| d. Pediatrics | 3 | 7 | 29 | 15 | 46 |
| e. Emergency/Urgent Care | 16 | 26 | 38 | 8 | 11 |
| f. Obstetrics | 11 | 7 | 28 | 22 | 32 |
| g .Ambulatory Care | 0 | 4 | 35 | 35 | 25 |
| h. Home Health/Hospice | 0 | 10 | 20 | 15 | 55 |
| i. Long Term Care | 9 | 11 | 13 | 3 | 65 |
| ***Indirect Care Staff*** | | | | | |
| j. Education | 3 | 10 | 35 | 34 | 18 |
| k. Management | 8 | 24 | 43 | 19 | 6 |
| ***Education Level*** | | | | | |
| l. Advanced Practice Nurses | 10 | 17 | 30 | 16 | 27 |
| m. Registered Nurses | 18 | 33 | 37 | 10 | 3 |
| n. Licensed Practical Nurses | 15 | 17 | 35 | 21 | 13 |
| o. Unlicensed Assistive Personnel | 4 | 14 | 35 | 36 | 11 |

8. Turnover rate in the year 2000 for Registered Nurses involved in direct patient care: 13.08, STDEV = 8.80
*(Turnover rate: The number of Registered Nurses in direct patient care hired to replace those who terminated employment as a percent of total Registered Nurses employed during the past fiscal year)*

9. On the average, how many **days** does it take your facility to fill a **posted** vacancy for a **direct care** Registered Nurse? 54.9, STDEV = 49.3

10. On the average, how many **days** does it take your facility to fill a **posted** vacancy for an **indirect care** Registered Nurse? 54.3, STDEV = 44.3

11. In the past fiscal year, which of the following inducements/employee-benefits has your organization used to recruit and/or retain Registered Nurses? (Check all that apply)

37 Better benefits than other employers
12 Clinical/career ladder
58 Employer provided/financed continuing education
65 Flexible hours
14 Higher pay for overtime than other employers
27 Higher salaries than other employers
15 On-site child care
49 Referral bonuses
30 Relocation assistance
26 Shared governance (e.g., participation in high-level organizational decision making)
41 Sign-on bonuses (average amount $2,125 [STDEV=1,435])
11 Stress relief programs
70 Supplemental pay for off-shift, specialty care, weekend or on-call
38 Support programs/preceptorship for new hires
72 Tuition reimbursement/scholarships
23 Other (describe)
_____

12. Which benefit has been most effective in **recruiting** Registered Nurses?

Salary/compensation n=14
Better benefits (general) n=12
Bonuses (referral or sign-on) n=12
Flexible hours n=12
Education/Tuition assistance n=5
Don't know/none n=5
Preceptorship n=4
Good work environment n=4
Health insurance (paid by employer, extra benefits) n=3
Other misc. n=3
Internships n=3
12-hour shifts n=1
Outside experiences n=1
Location of facility n=1
Low patient-staff ratio n=1

13. Which benefit has been most effective in **retaining** Registered Nurses?

| | |
|---|---|
| Flexible hours n=19 | Other misc. n=6 |
| Better benefits (general) n=15 | Education/tuition assistance n=4 |
| Salary/compensation n=11 | Bonuses (referral, longevity) n=3 |
| Don't know/none n=10 | Preceptorship n=1 |
| Good work environment n=7 | Low patient-staff ratio n=1 |

14. What percentage of nursing [FTEs] do temporary or traveling personnel cover on average in the last year in your facility? 3.4% (STDEV = 6.5%)

15. Has the use of supplemental staffing strategies for Registered Nurses (e.g., traveler and temporary agencies) changed in the last six months in your facility?

| | |
|---|---|
| Increased significantly | 7 |
| Increased | 27 |
| Stayed about the same | 46 |
| Decreased | 13 |
| Decreased significantly | 7 |

16. Does your facility currently recruit foreign-educated Registered Nurses?

| | |
|---|---|
| No | 76 |
| Yes, on a regular basis | 8 |
| Yes, occasionally | 15 |

17. List the top three countries from which your facility recruits:
    1. Canada n=11; Phillipines n=4; USA n=9
    2. Canada n=6; Australia n=1; Phillipines n=1; USA n=2
    3. Canada n=1; USA n=2; England n=1; Phillipines n=1

    Totals: Canada n=18; USA n=13; Phillipines n=6; Australia n=1; England n=1

**SECTION D: General Observations**

Please provide any additional comments or observations you may have about the Registered Nurse workforce and/or the job market for Registered Nurses. Attach a separate sheet of paper if necessary.

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Thank you for taking the time to complete this survey. If you have any questions regarding the survey, please contact Jane Powers, Senior Health Policy Consultant, Public Sector Consultants, Inc., at 517-484-4954.

Please use the enclosed pre-paid envelope to return this form by _____, 2001 to Public Sector Consultants, Inc., 600 W. St. Joseph St., Suite 10, Lansing, MI 48933-2265.